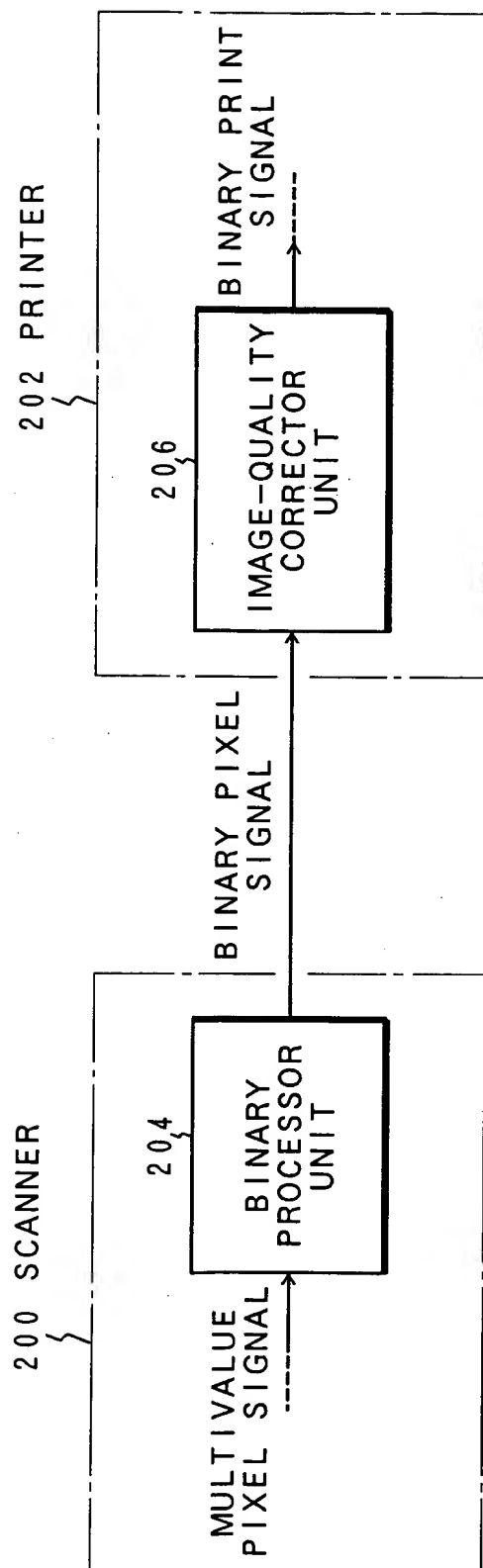
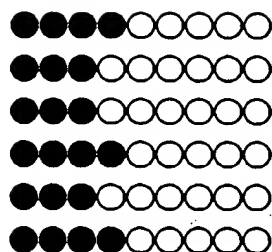


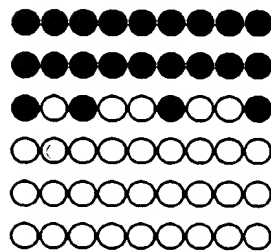
FIG. 1 PRIOR ART



PRIOR ART
FIG. 2A

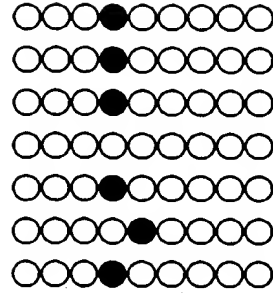


PRIOR ART
FIG. 2B

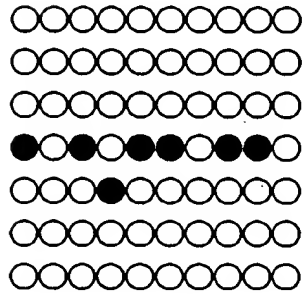


09835620-041701

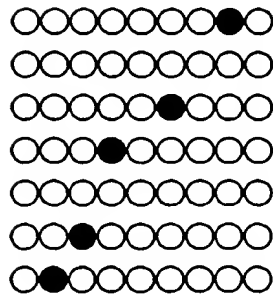
P R I O R A R T
F I G. 3 A



P R I O R A R T
F I G. 3 B



P R I O R A R T
F I G. 3 C



09835620 041701

FIG. 4A PRIOR ART

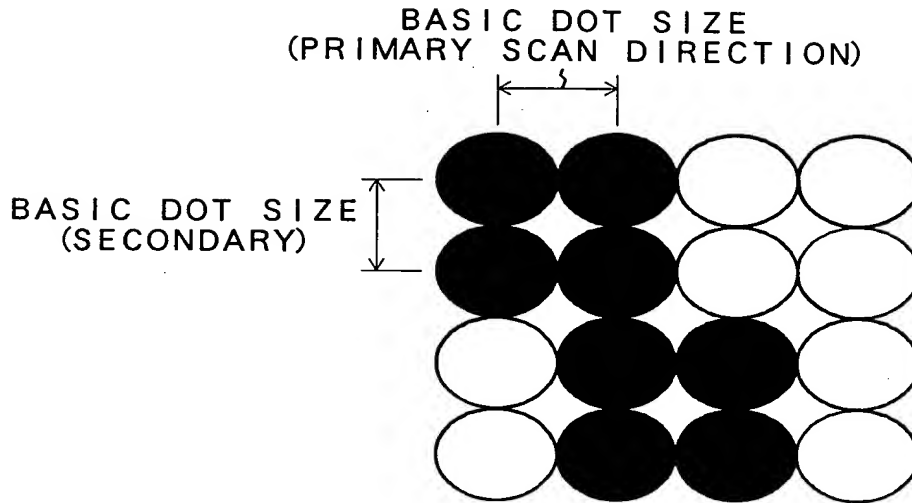
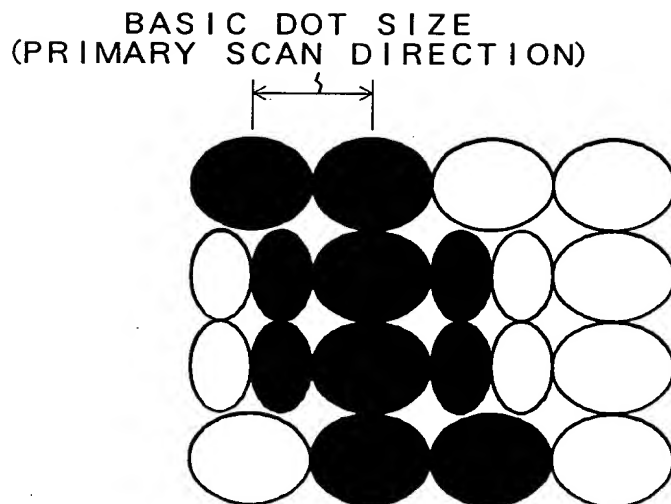
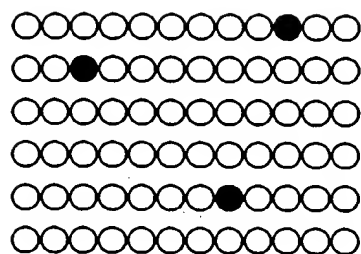


FIG. 4B PRIOR ART

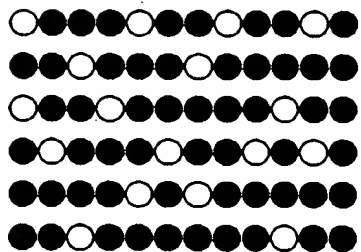


09835620-041701

PRIOR ART
FIG. 5A

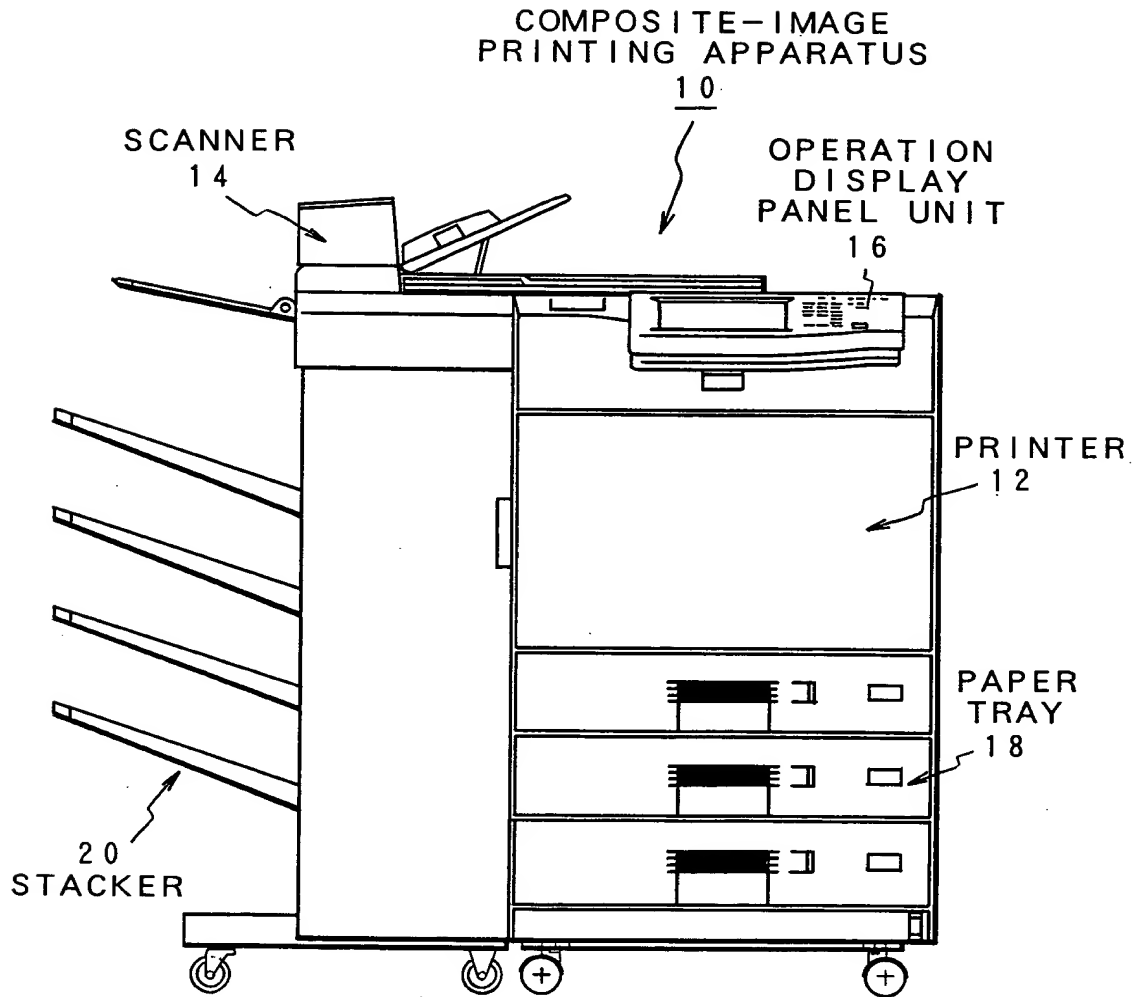


PRIOR ART
FIG. 5B



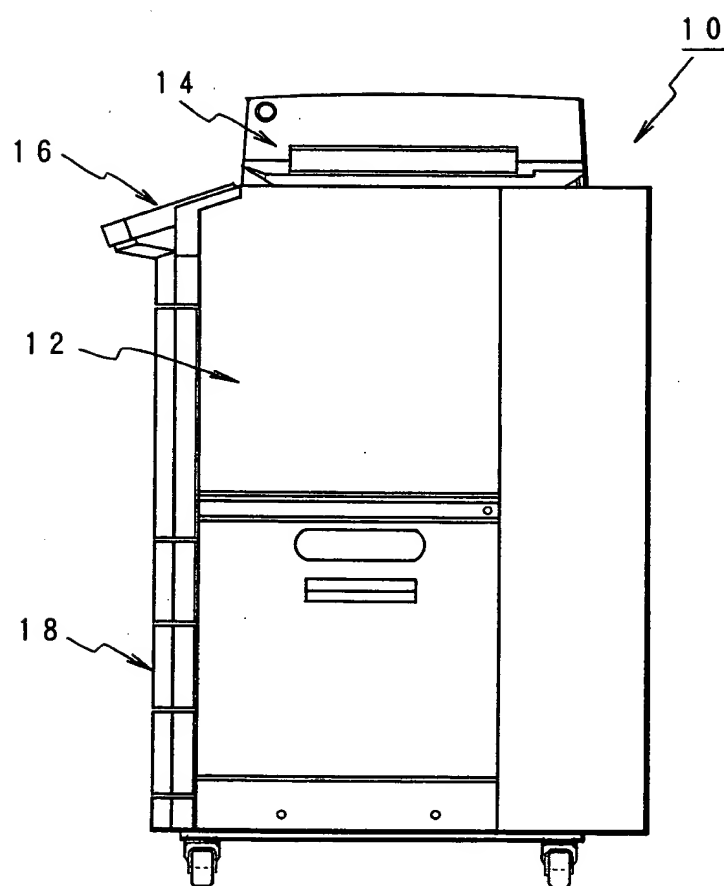
09835620, 041701

FIG. 6



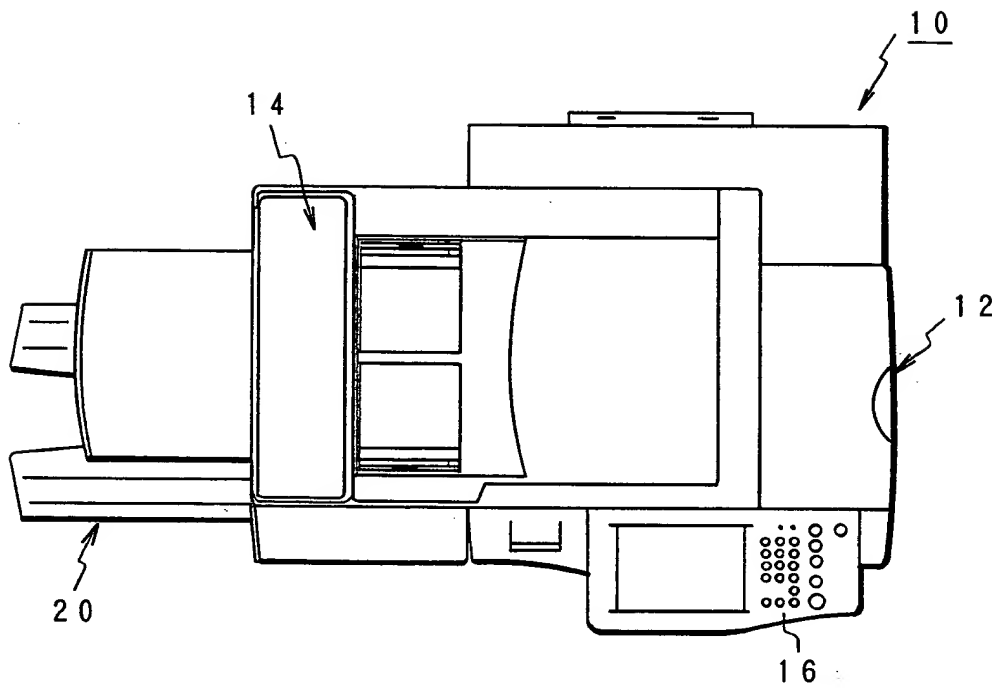
09835620-041701

FIG. 7



09835620-041701

FIG. 8



09835620-041701

FIG. 9

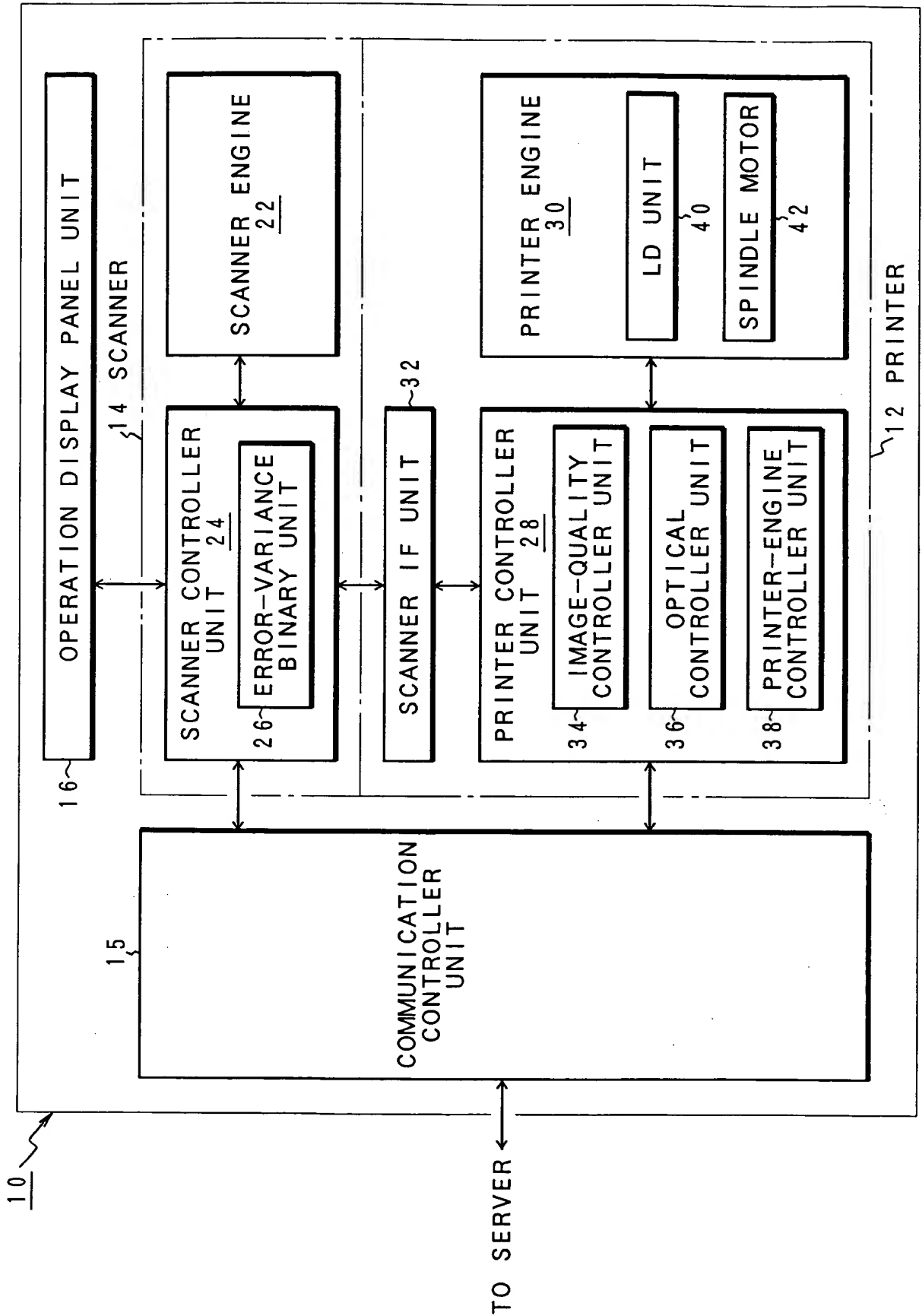




FIG. 10A

50 DATA LINE MEMORY

	$n-2^{\text{TH}}$ DOT	$n-1^{\text{TH}}$ DOT	n^{TH} DOT	$n+1^{\text{TH}}$ DOT	$n+2^{\text{TH}}$ DOT
m^{TH} LINE			$D_{m,n}$	$D_{m,n+1}$	$D_{m,n+2}$
$m+1^{\text{TH}}$ LINE	$D_{m+1,n-2}$	$D_{m+1,n-1}$	$D_{m+1,n}$	$D_{m+1,n+1}$	$D_{m+1,n+2}$
$m+2^{\text{TH}}$ LINE	$D_{m+2,n-2}$	$D_{m+2,n-1}$	$D_{m+2,n}$	$D_{m+2,n+1}$	$D_{m+2,n+2}$

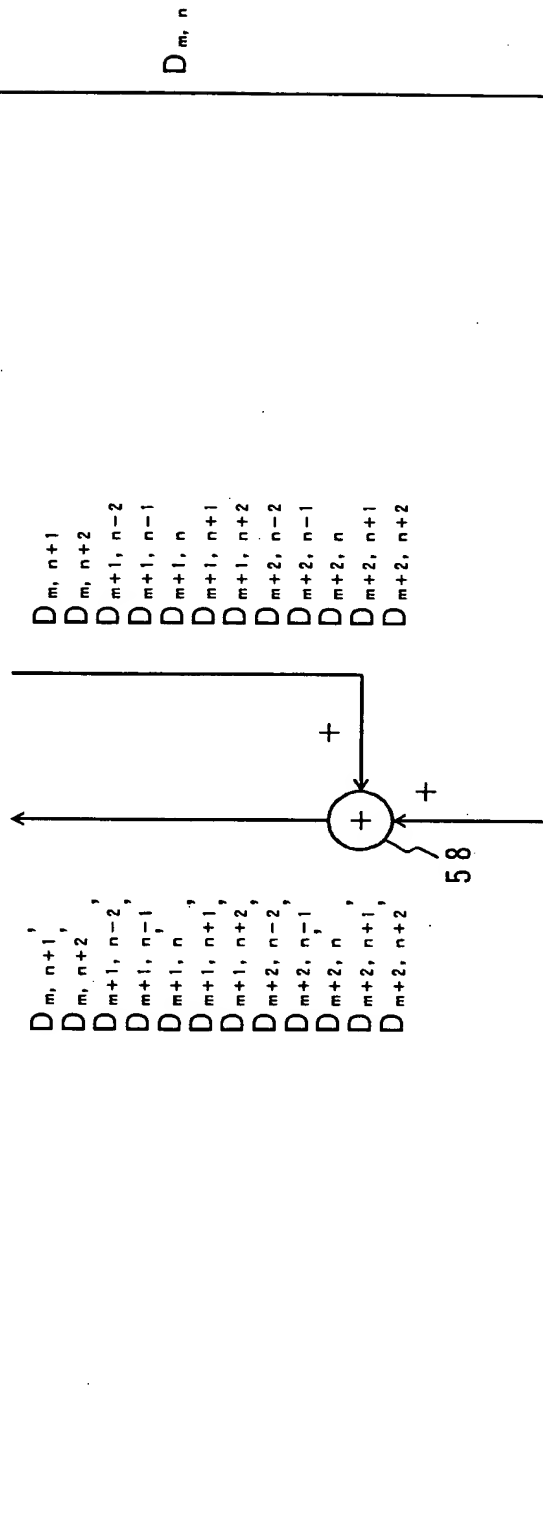


FIG. 10B

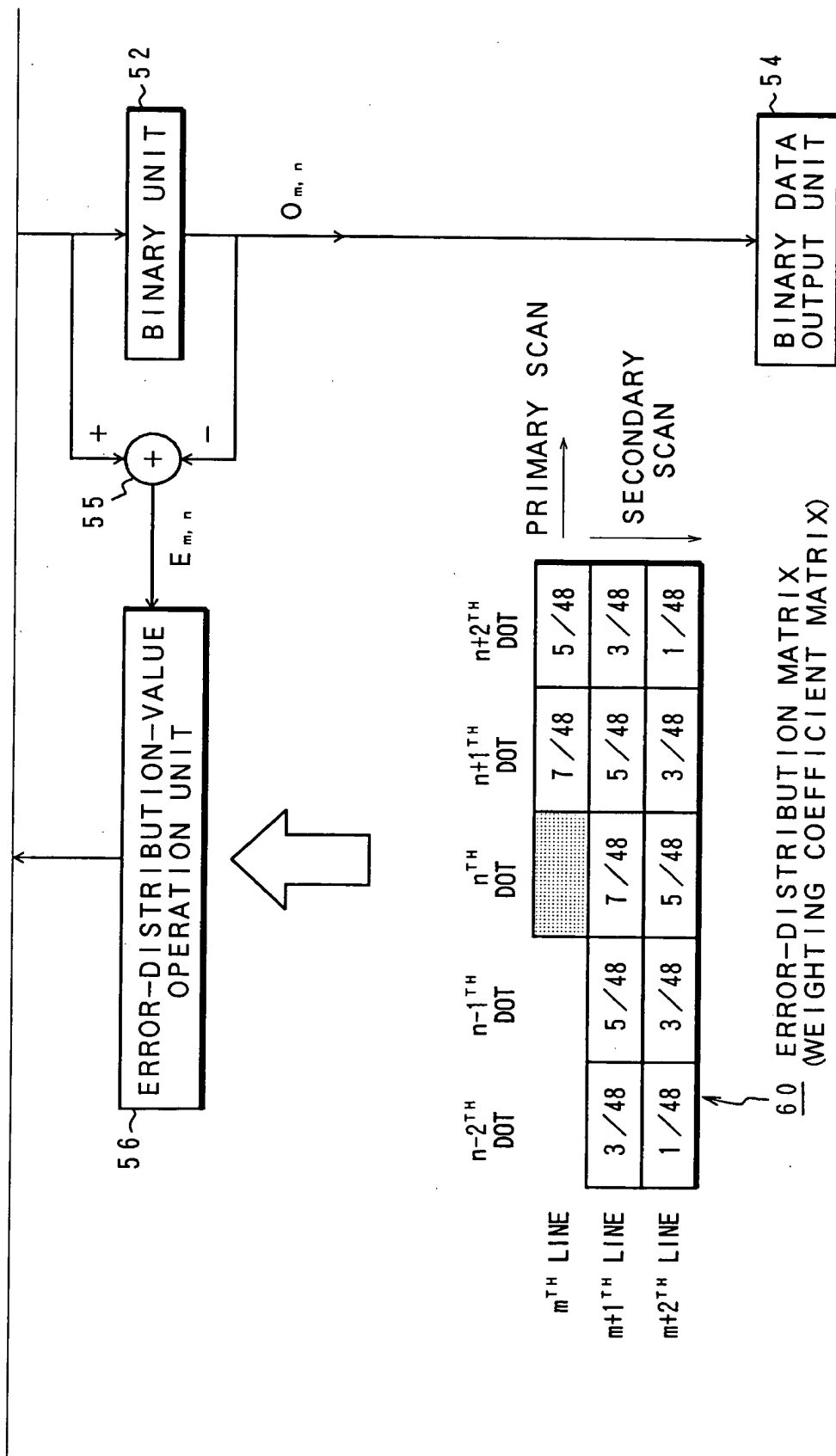


FIG. 11A

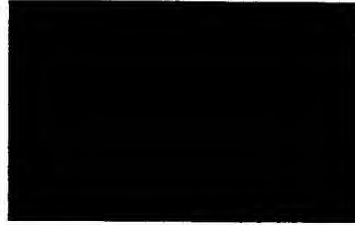


FIG. 11B

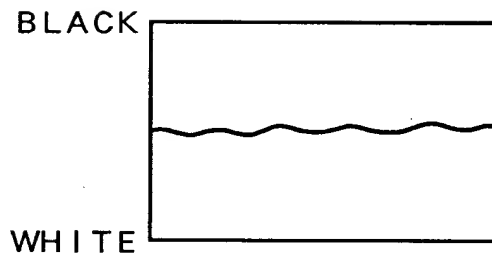
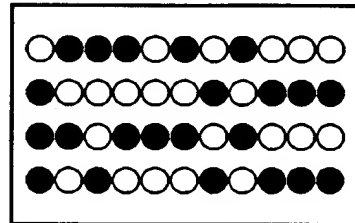


FIG. 11C



09835620-041701

FIG. 12A

ORIGINAL PICTURE
IMAGE

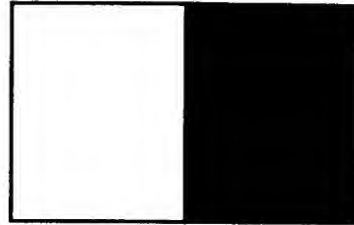


FIG. 12B

MULTIVALUE DENSITY
LEVEL

BLACK

WHITE

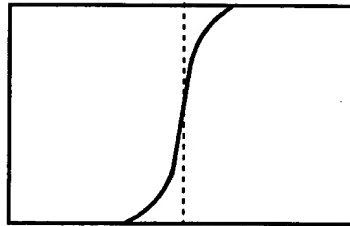
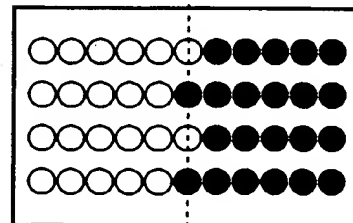


FIG. 12C

OUTPUT IMAGE



09835620-041701

FIG. 13A

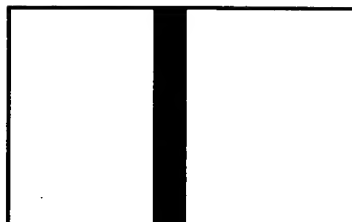


FIG. 13B

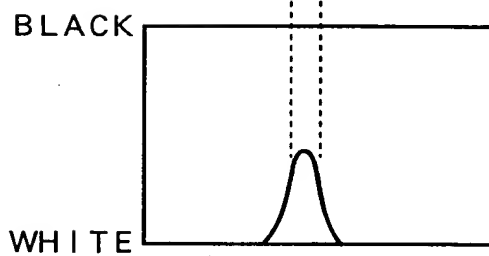
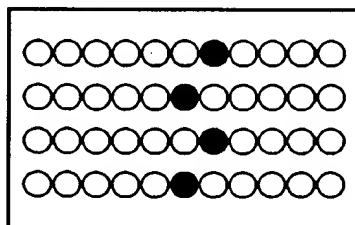


FIG. 13C



09835620-041701

FIG. 14

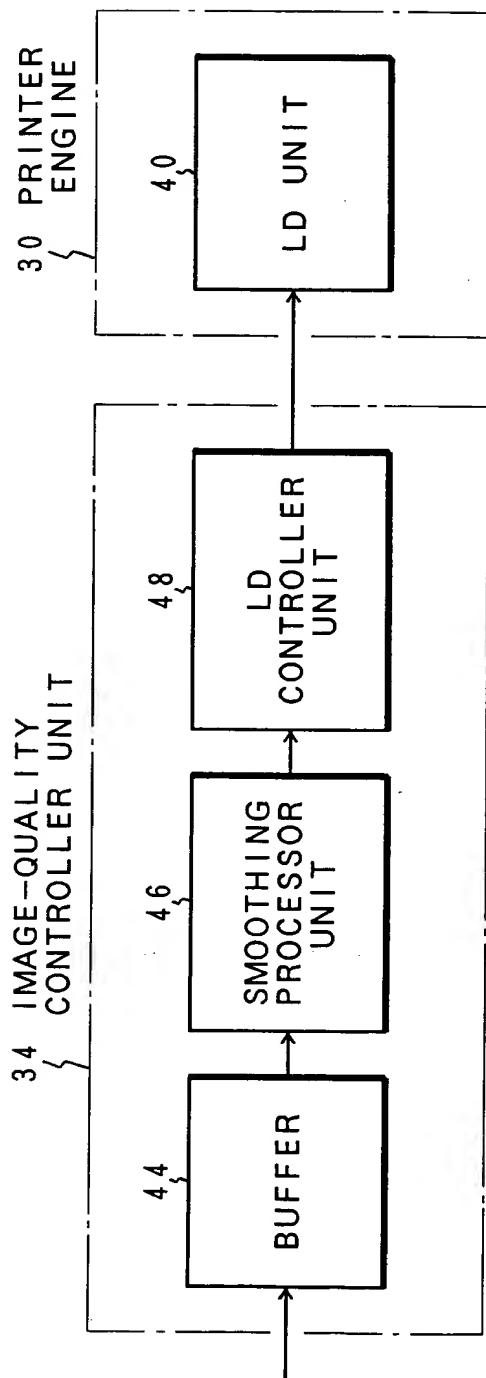


FIG. 15

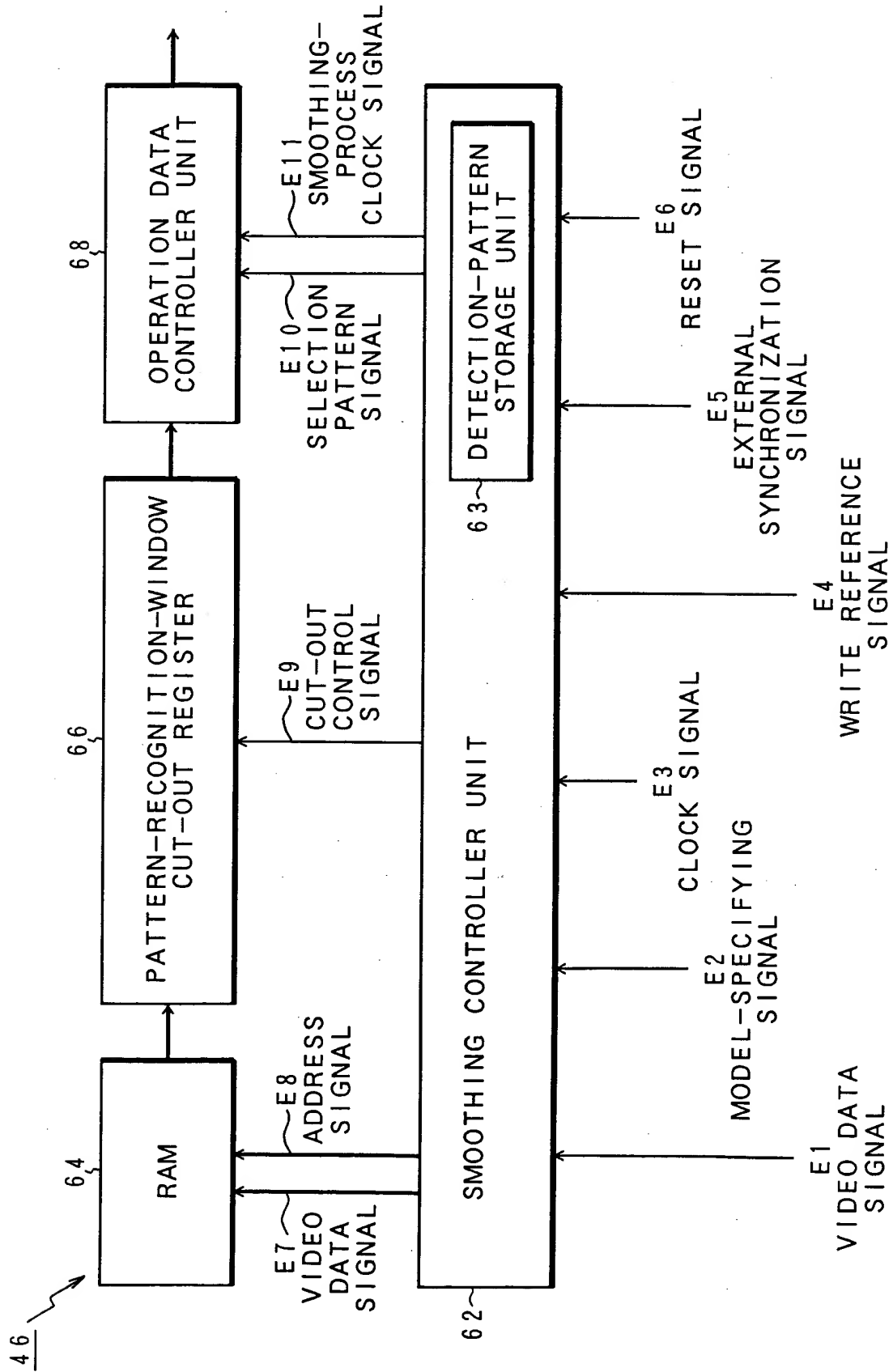


FIG. 16

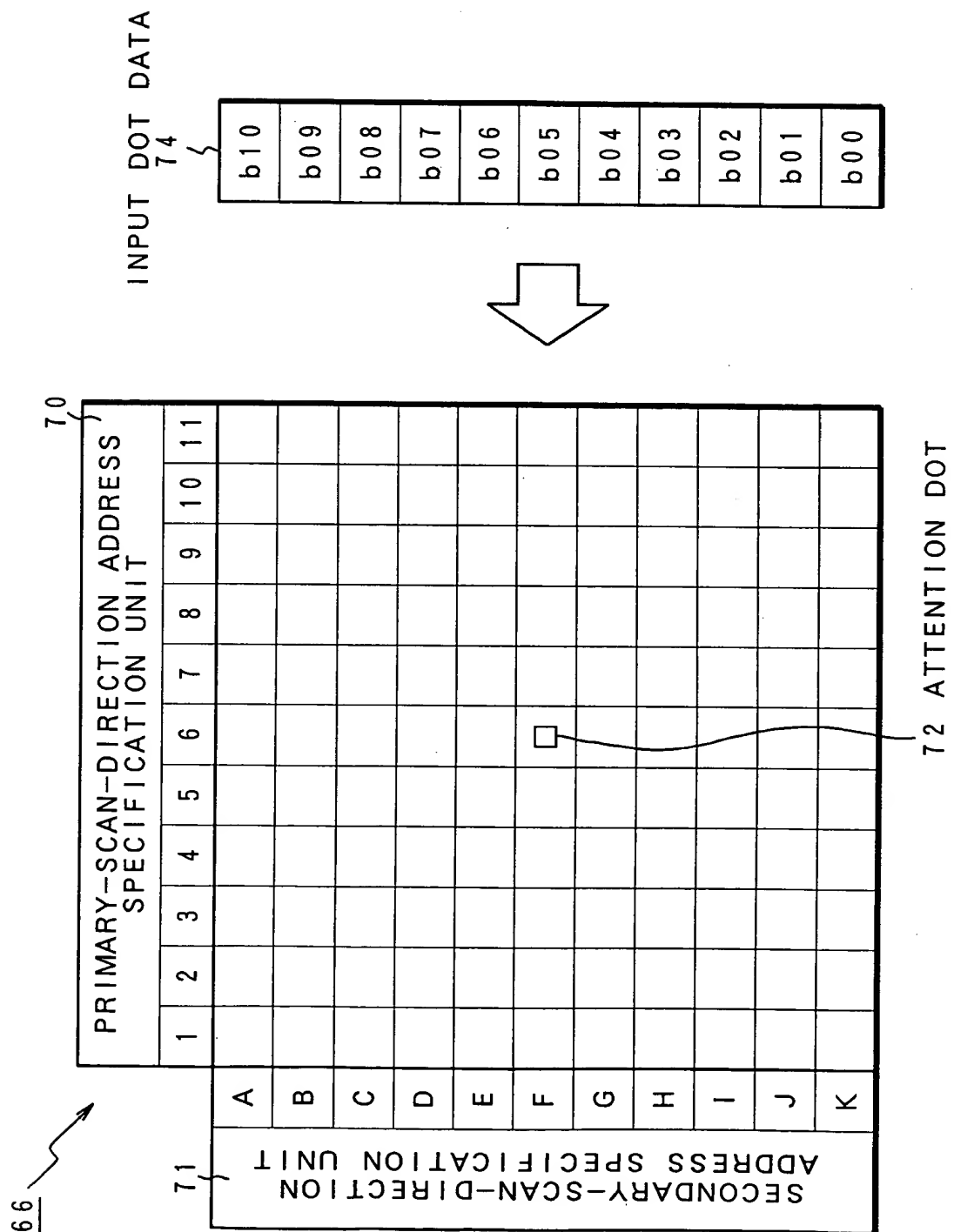
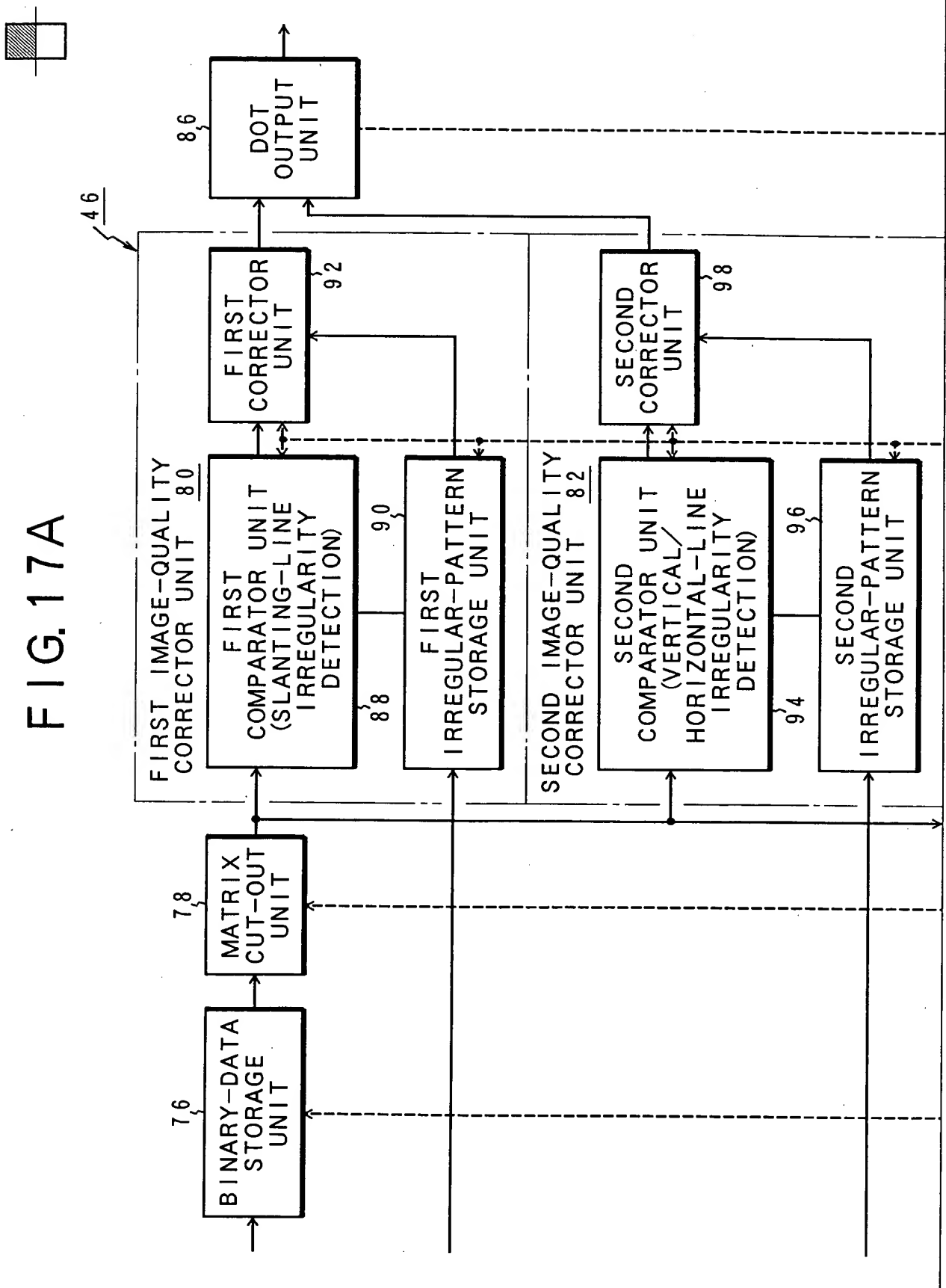


FIG. 17A



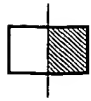


FIG. 17B

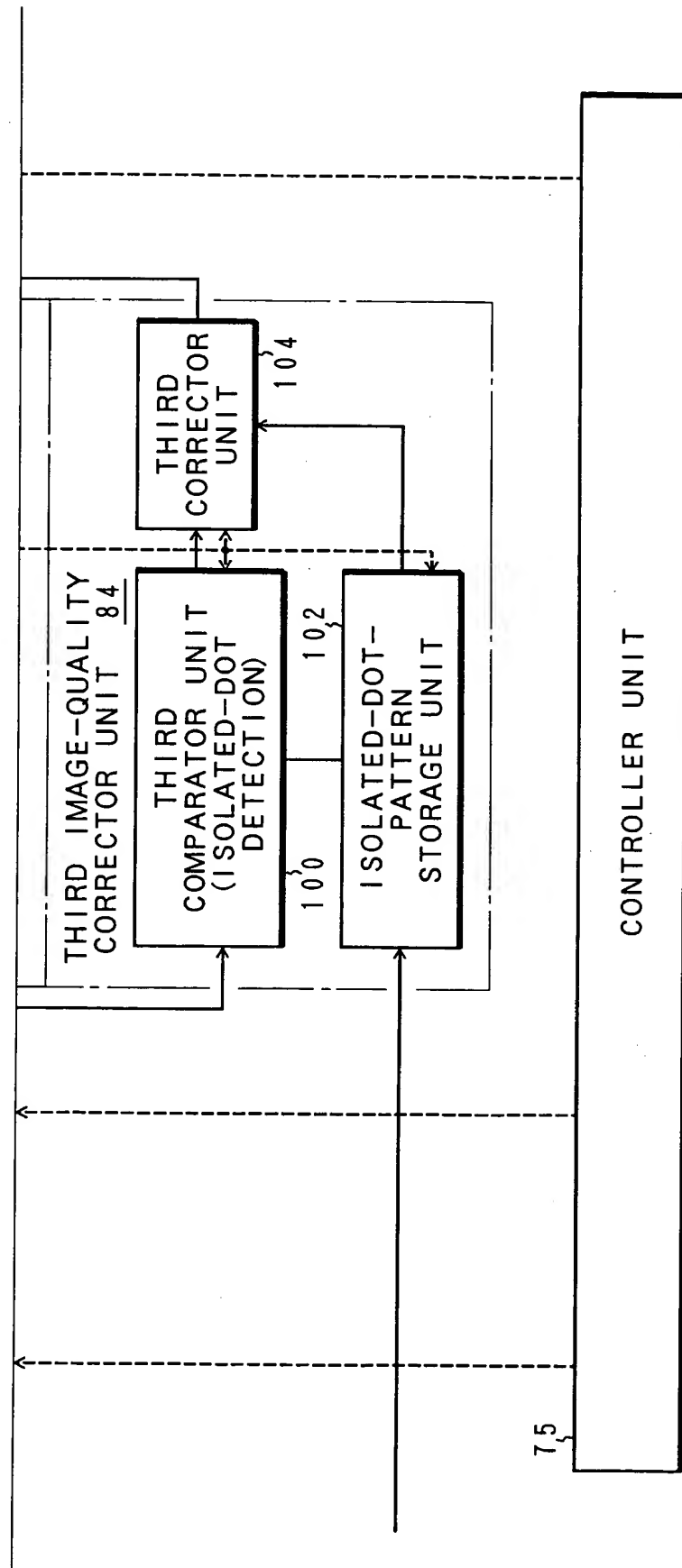


FIG. 18A

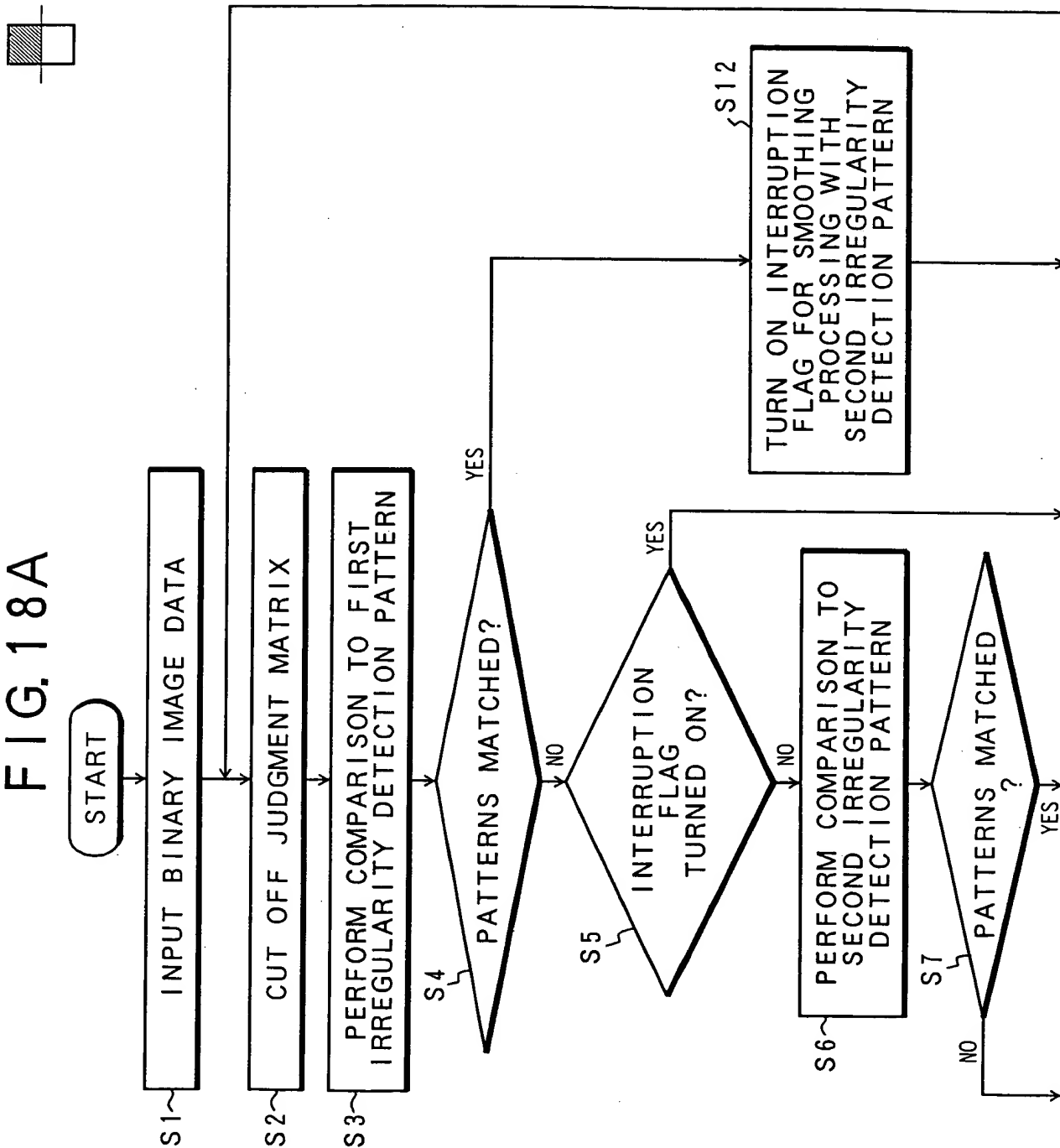


FIG. 18B

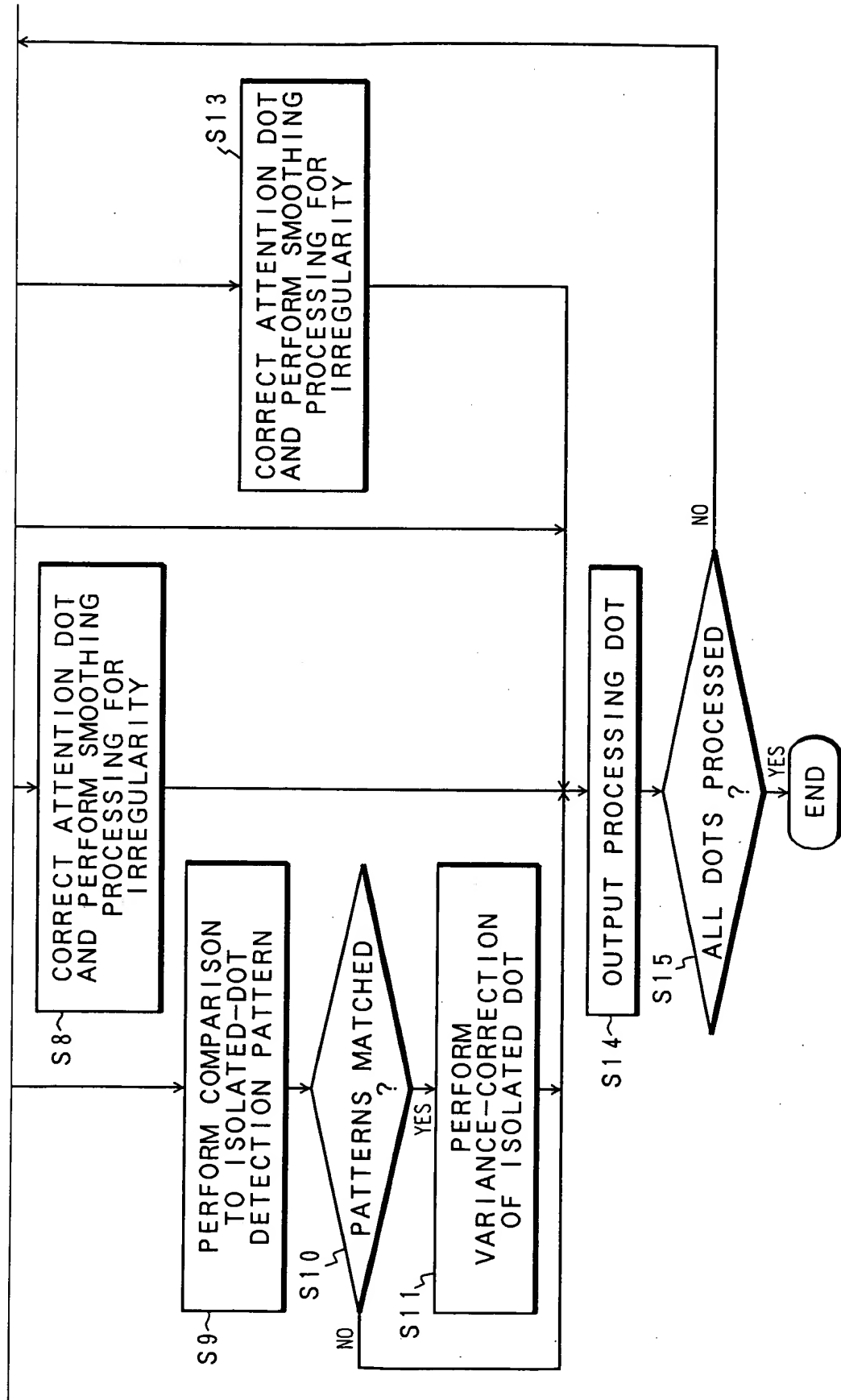
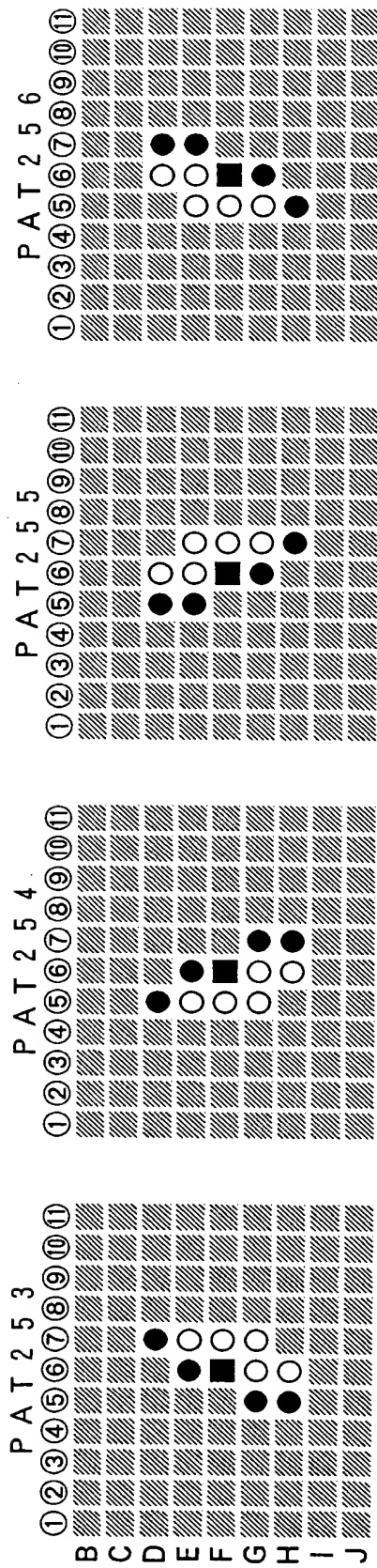


FIG. 19

STORAGE UNITS	PATTERN CONTENTS	BINARY METHODS
FIRST IRREGULAR-PATTERN STORAGE UNIT	SLANTING-LINE IRREGULARITY DETECTION PATTERN	SIMPLE BINARY/DITHER
SECOND IRREGULAR-PATTERN STORAGE UNIT	VERTICAL/HORIZONTAL-LINE IRREGULARITY DETECTION PATTERN	ERROR VARIANCE
	THIN-LINE PATCHY DETECTION PATTERN	ERROR VARIANCE
ISOLATED-DOT-PATTERN STORAGE UNIT	ISOLATED-DOT DETECTION PATTERN	ERROR VARIANCE

FIG. 20

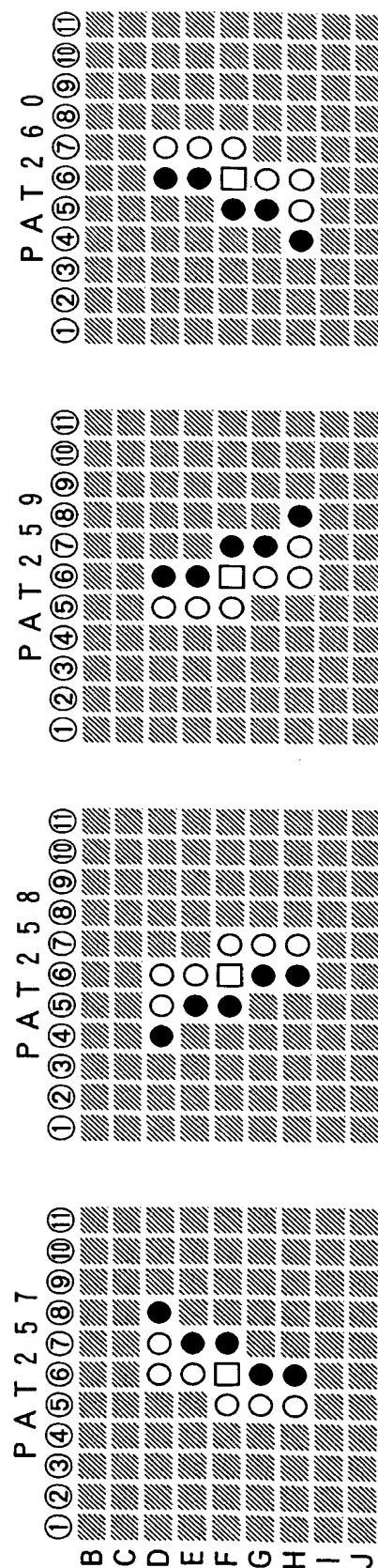


① 00 1110 00
② 00 1100 00
③ 00 1111 00

00 0111 00
00 0011 00
00 1111 00

00 1110 00
00 1100 00
00 1111 00

00 0111 00
00 0011 00
00 1111 00



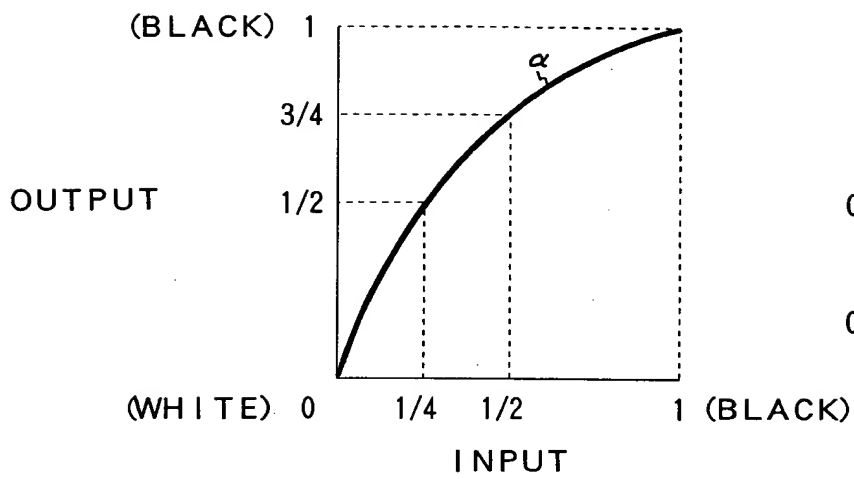
① 00 0000 00
② 00 0001 00
③ 00 0011 00

00 0000 00
00 1000 00
00 1100 00

00 0000 00
00 0001 00
00 0011 00

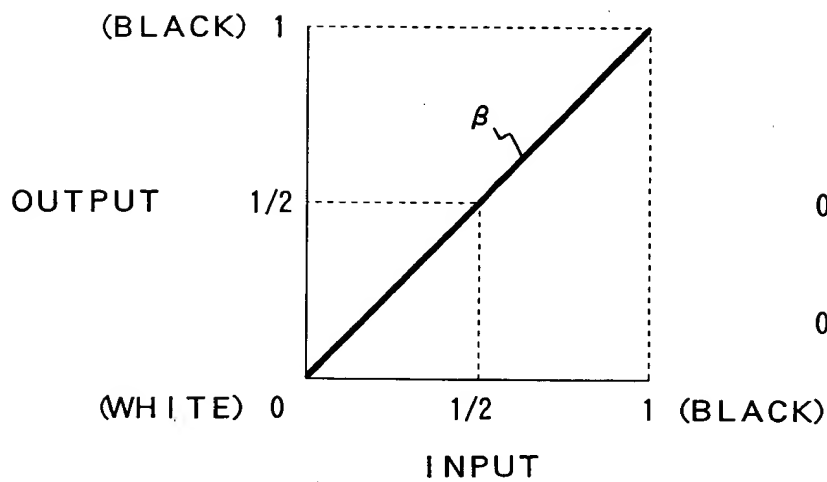
00 0000 00
00 1000 00
00 1100 00

FIG. 22A



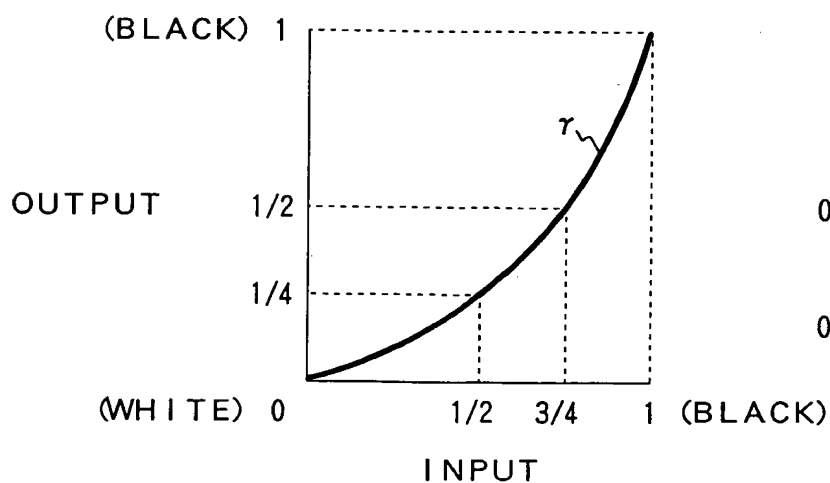
105-1
 00 0111 00
 105-2
 00 1110 00

FIG. 22B



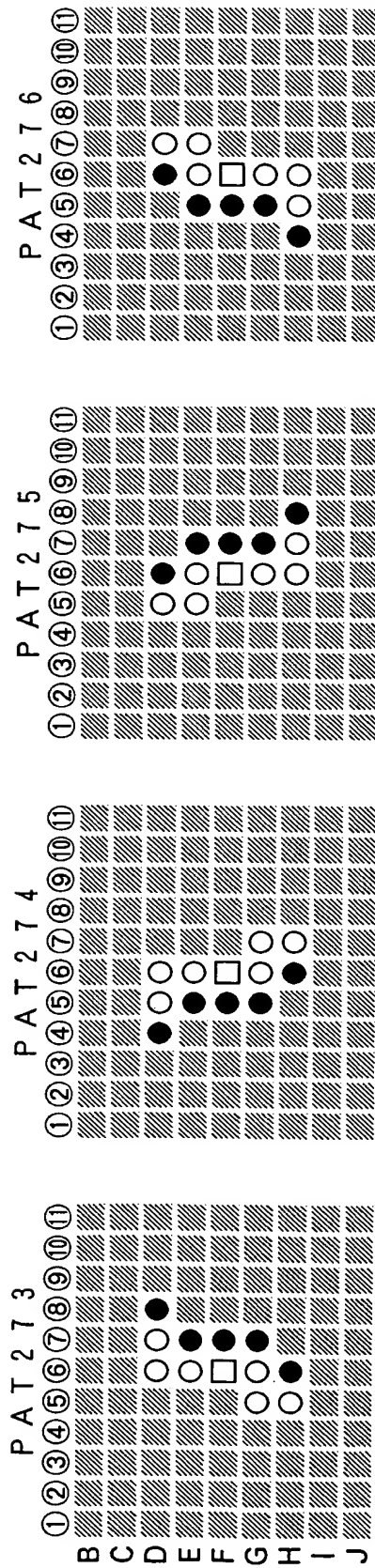
106-1
 00 0011 00
 106-2
 00 1100 00

FIG. 22C



108-1
 00 0001 00
 108-2
 00 1000 00

FIG. 24

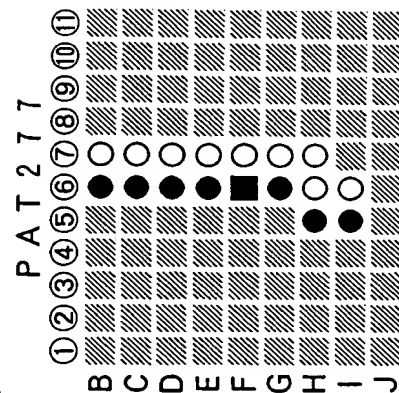


① 00 0000 00
② 00 0001 00
③ 00 0011 00

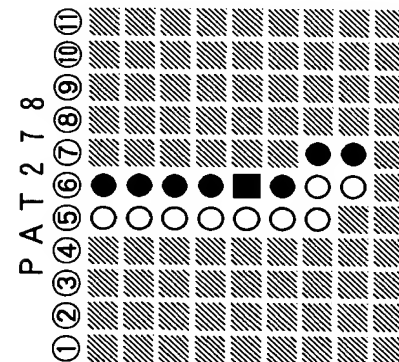
00 0000 00
00 1000 00
00 1100 00

00 0000 00
00 0001 00
00 0011 00

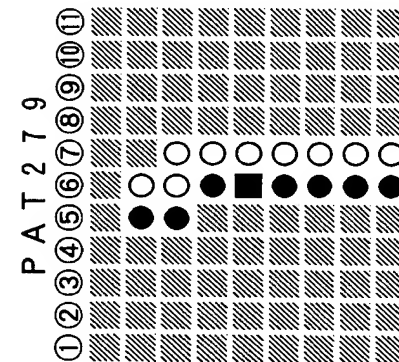
00 0000 00
00 1000 00
00 1100 00



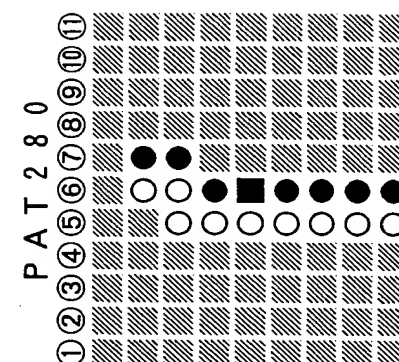
① 00 1100 00
② 00 1110 00
③ 00 1111 00



00 0011 00
00 0111 00
00 1111 00

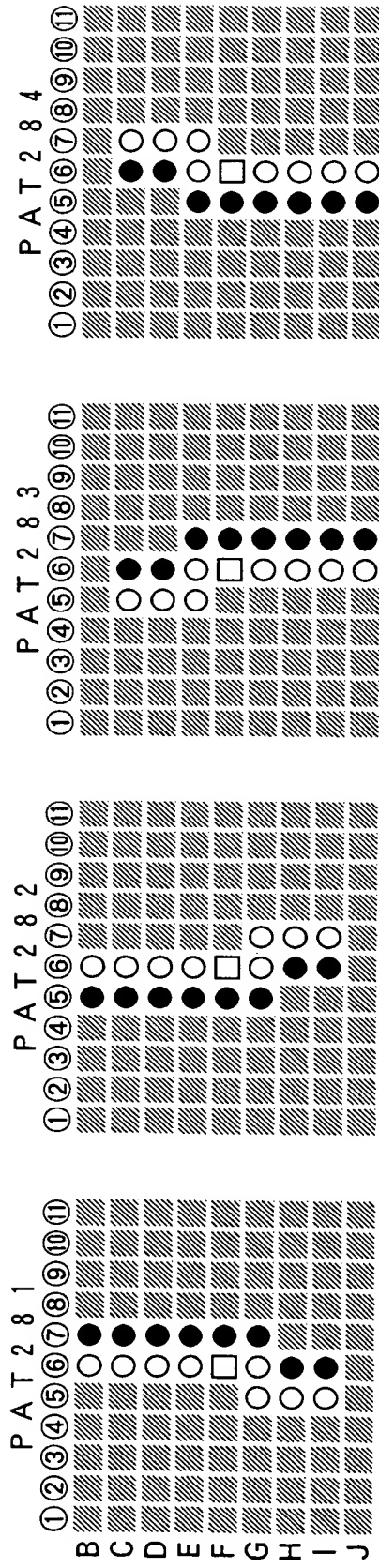


00 1100 00
00 1110 00
00 1111 00



00 0011 00
00 0111 00
00 1111 00

FIG. 25

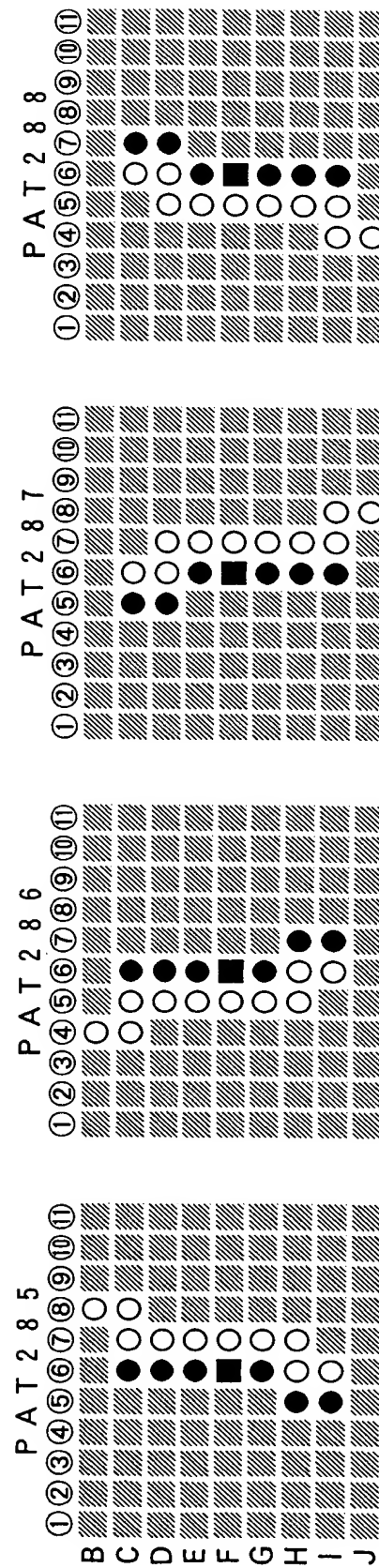


① 00 0001 00
② 00 0011 00
③ 00 0111 00

00 1000 00
00 1100 00
00 1110 00

00 0001 00
00 0011 00
00 0111 00

00 1000 00
00 1100 00
00 1110 00



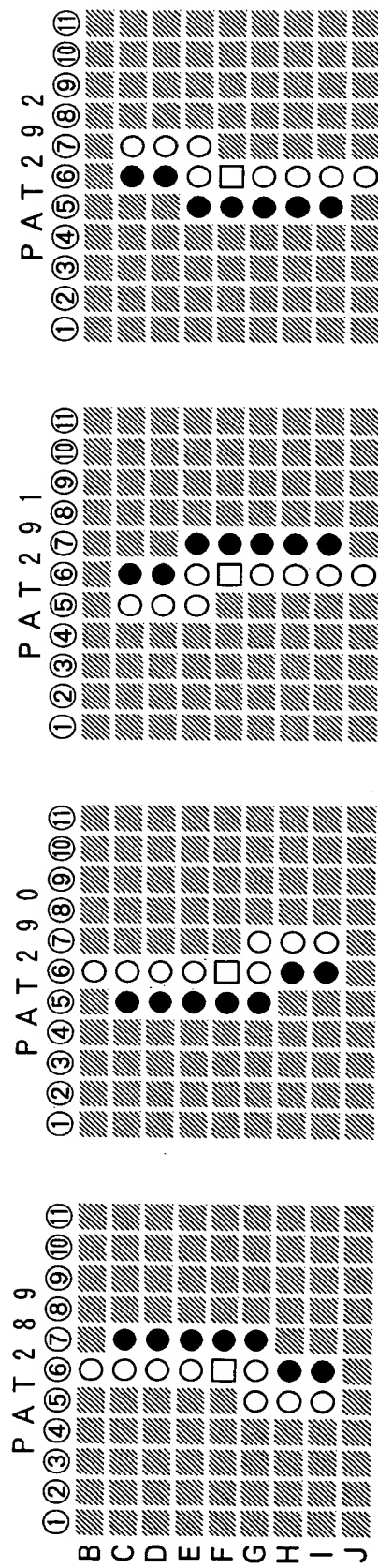
① 00 1100 00
② 00 1110 00
③ 00 1111 00

00 0011 00
00 0111 00
00 1111 00

00 1100 00
00 1110 00
00 1111 00

00 0011 00
00 0111 00
00 1111 00

FIG. 26

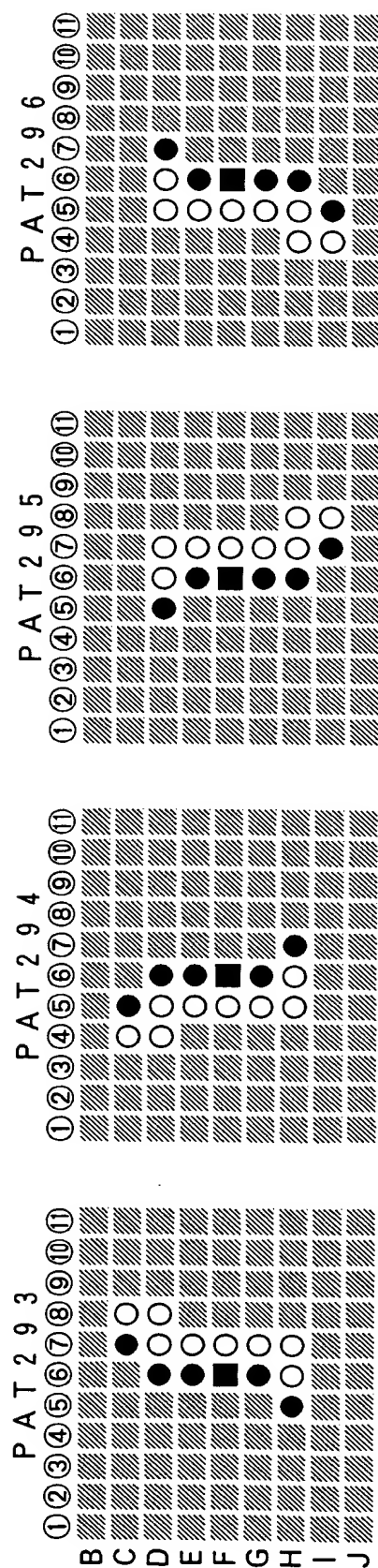


① 00 0001 00
 ② 00 0011 00
 ③ 00 0111 00

00 1000 00
 00 1100 00
 00 1110 00

00 0001 00
 00 0011 00
 00 0111 00

00 1000 00
 00 1100 00
 00 1110 00



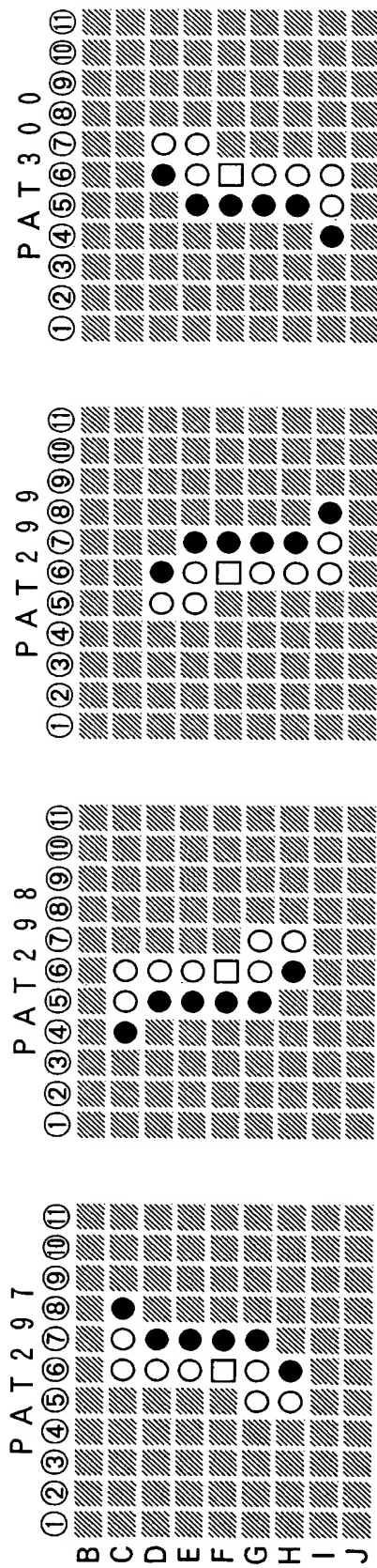
① 00 1100 00
 ② 00 1110 00
 ③ 00 1111 00

00 0011 00
 00 0111 00
 00 1111 00

00 1100 00
 00 1110 00
 00 1111 00

00 0011 00
 00 0111 00
 00 1111 00

FIG. 27

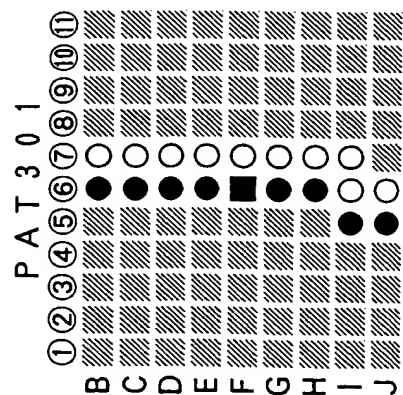


① 00 0001 00
② 00 0011 00
③ 00 0111 00

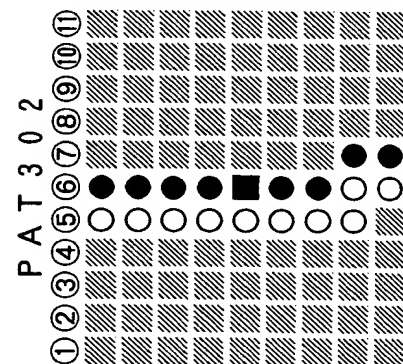
00 1000 00
00 1100 00
00 1110 00

00 0001 00
00 0011 00
00 0111 00

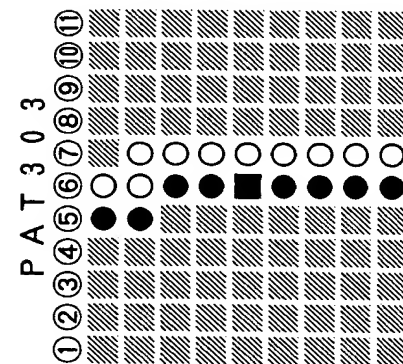
00 1000 00
00 1100 00
00 1110 00



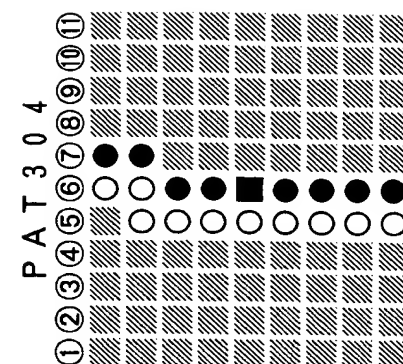
① 00 1100 00
② 00 1110 00
③ 00 1111 00



00 0011 00
00 0111 00
00 1111 00



00 1100 00
00 1110 00
00 1111 00



00 0011 00
00 0111 00
00 1111 00

FIG. 29

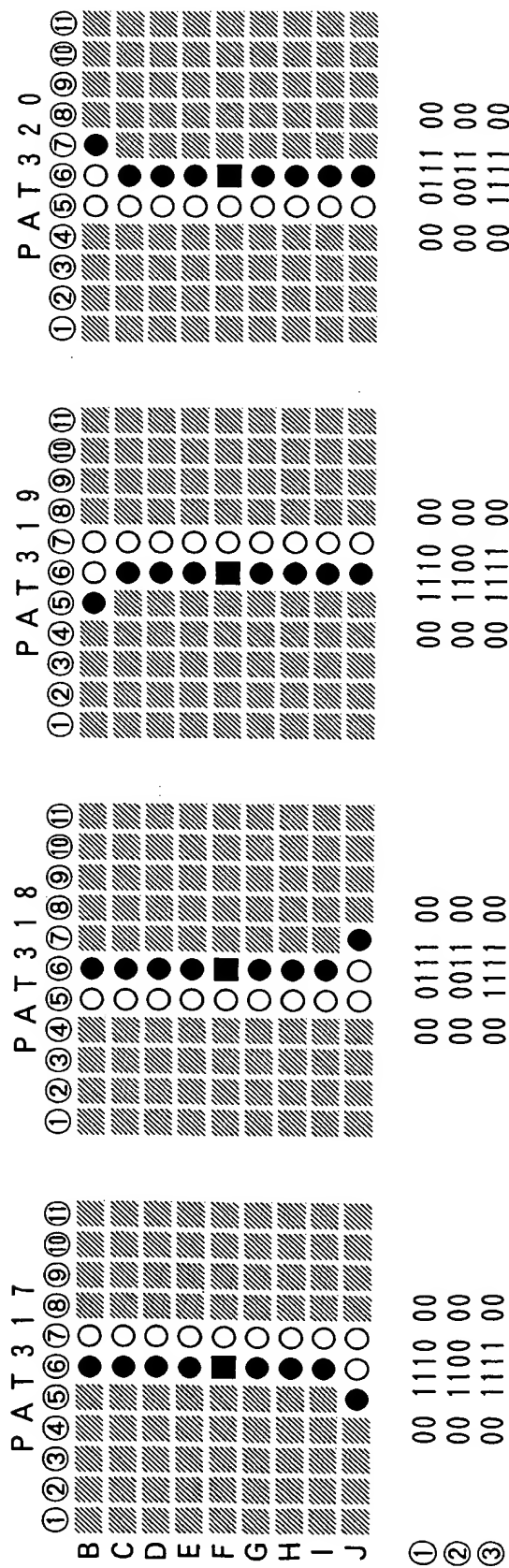
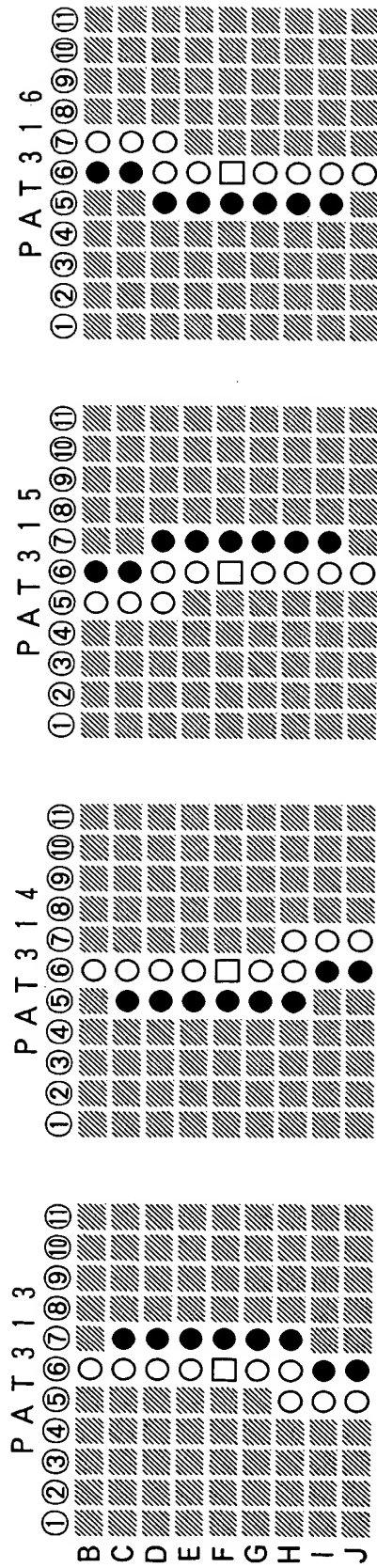


FIG. 30

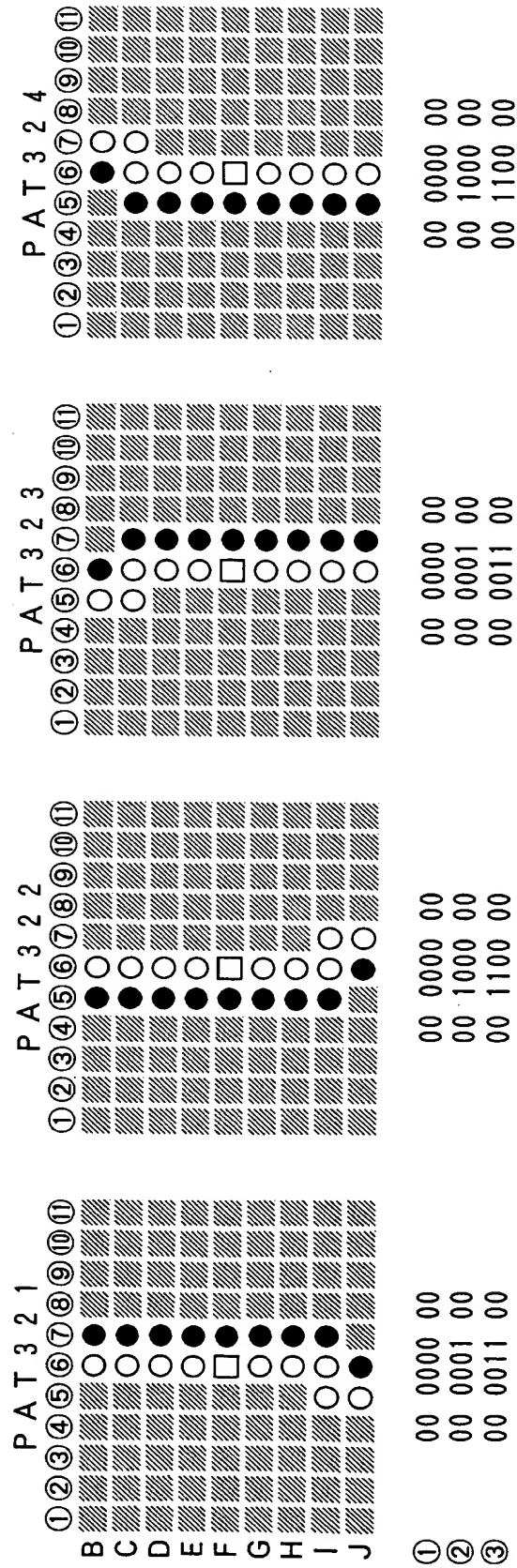


FIG. 31

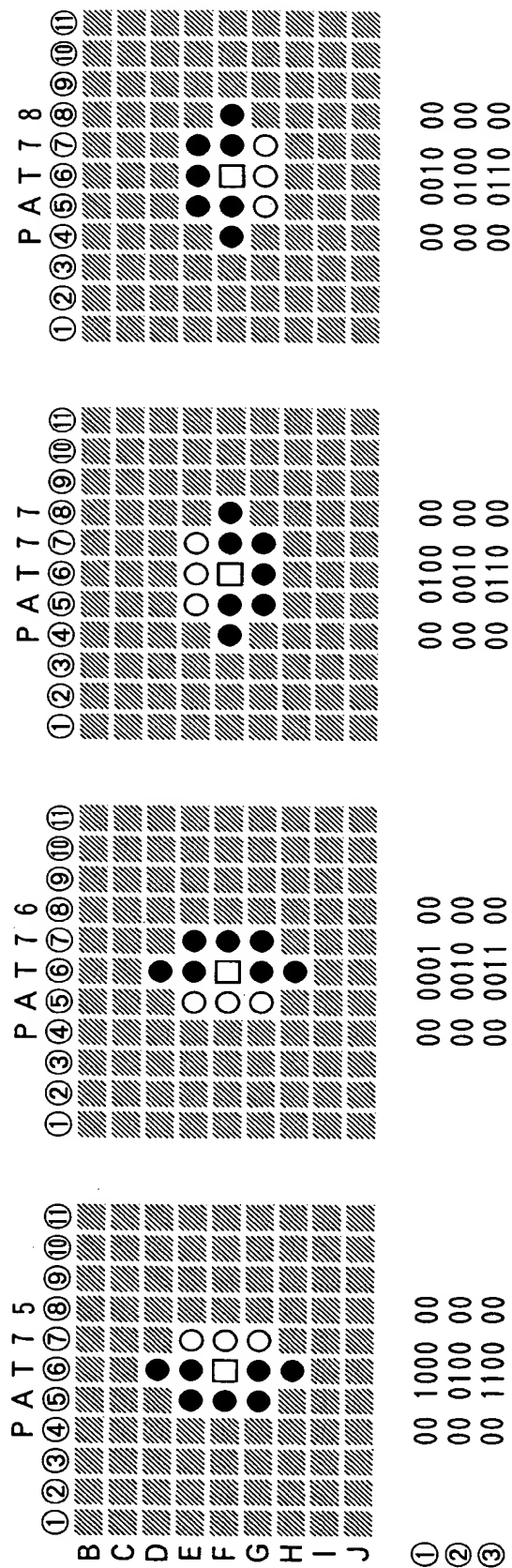
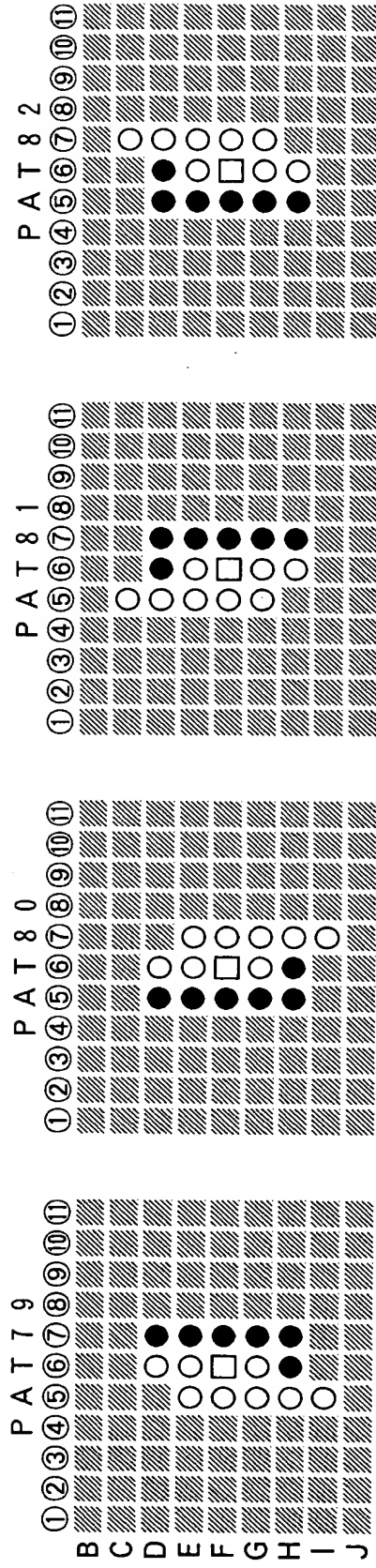


FIG. 32

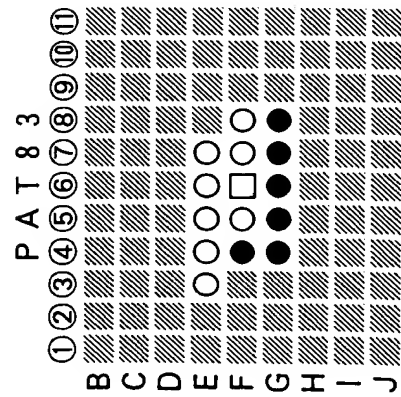


① 00 0000 00
② 00 0001 00
③ 00 0011 00

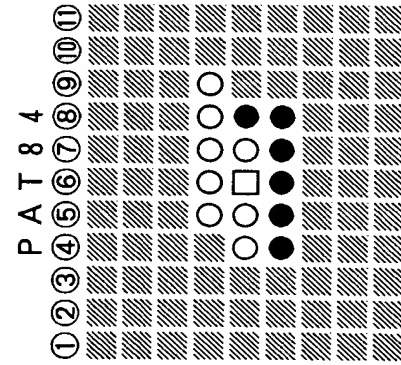
00 0000 00
00 1000 00
00 1100 00

00 0000 00
00 0001 00
00 0011 00

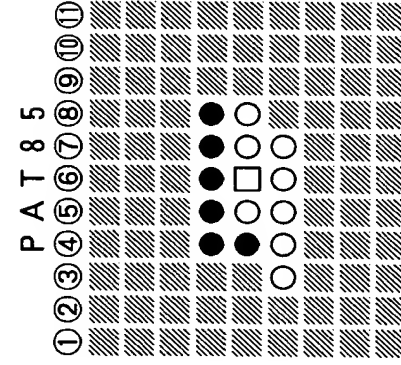
00 0000 00
00 1000 00
00 1100 00



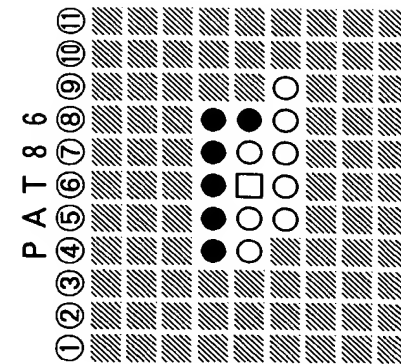
① 00 0000 00
② 00 1000 00
③ 00 1100 00



00 0000 00
00 0001 00
00 0011 00

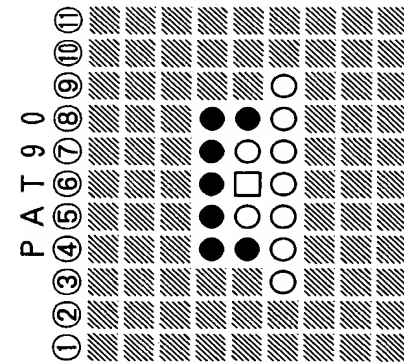


00 0000 00
00 1000 00
00 1100 00

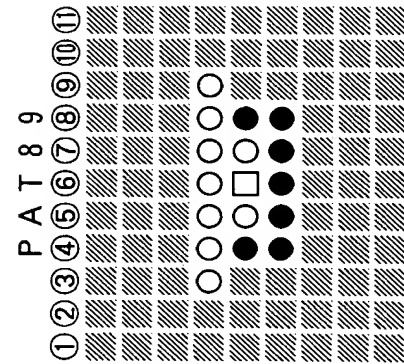


00 0000 00
00 0001 00
00 0011 00

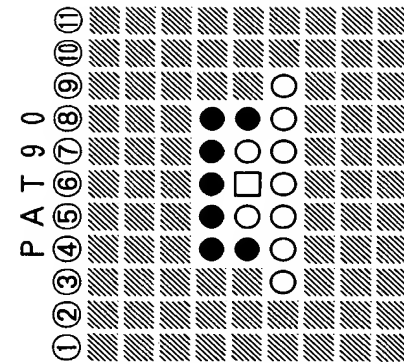
FIG. 33



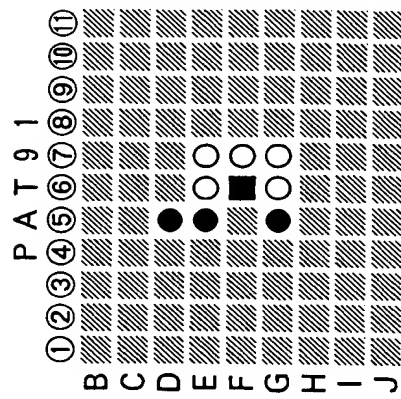
① 00 0000 00
② 00 0001 00
③ 00 0011 00



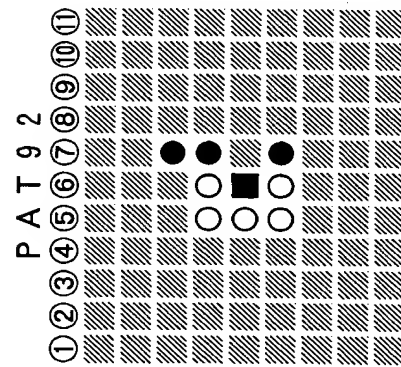
00 0000 00
00 1000 00
00 1100 00



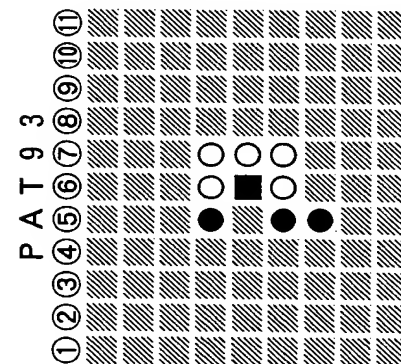
00 0000 00
00 0100 00
00 0010 00



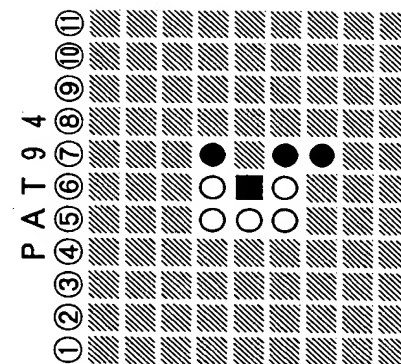
① 00 1000 00
② 00 1100 00
③ 00 1110 00



00 0001 00
00 0011 00
00 0111 00

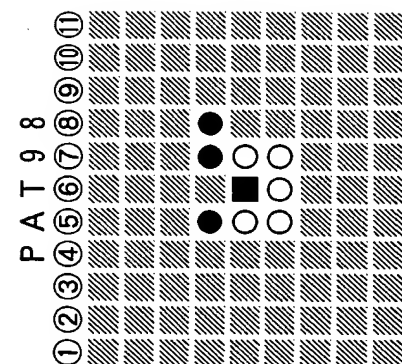


00 1000 00
00 1100 00
00 1110 00

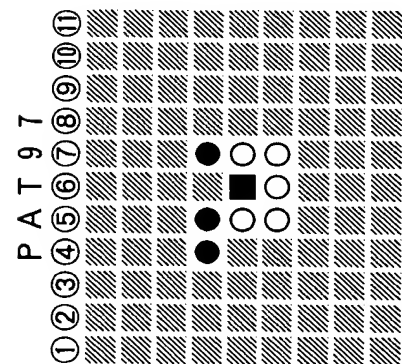


00 0001 00
00 0011 00
00 0111 00

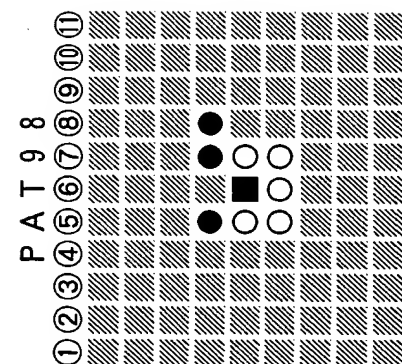
FIG. 34



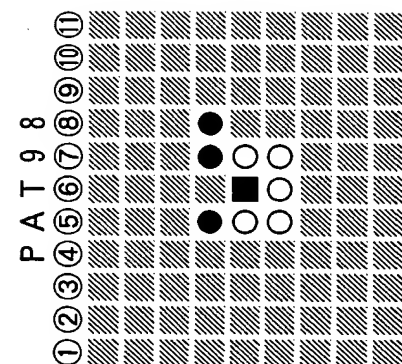
① 00 0100 00
② 00 0110 00
③ 00 1110 00



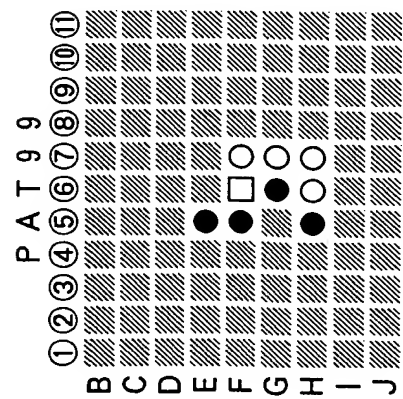
00 0010 00
00 0110 00
00 0111 00



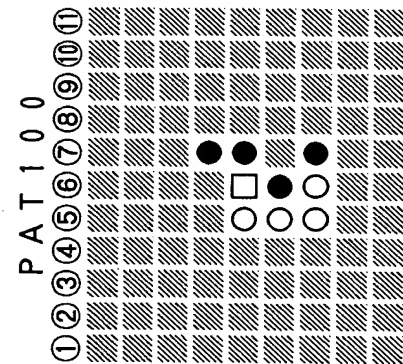
00 0100 00
00 0110 00
00 1110 00



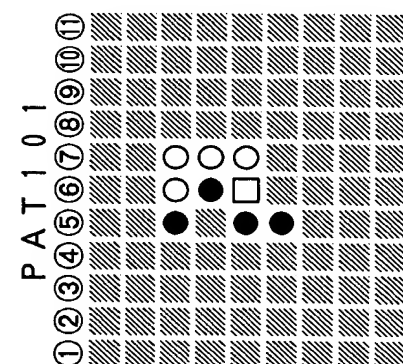
00 0010 00
00 0110 00
00 0111 00



① 00 0000 00
② 00 1000 00
③ 00 1100 00

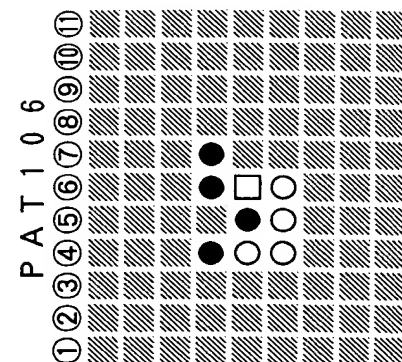


00 0000 00
00 1000 00
00 1100 00

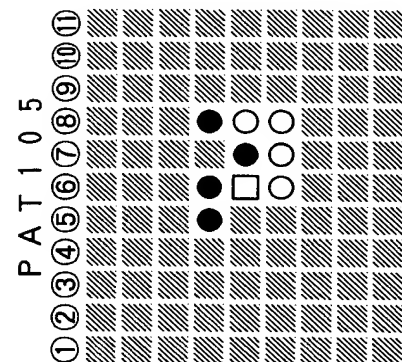


00 0000 00
00 0001 00
00 0011 00

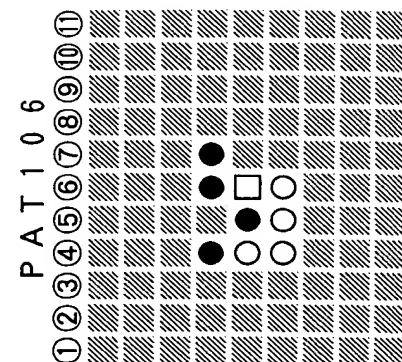
FIG. 35



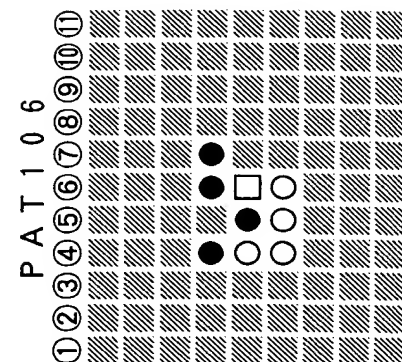
① 00 0000 00
② 00 0010 00
③ 00 0110 00



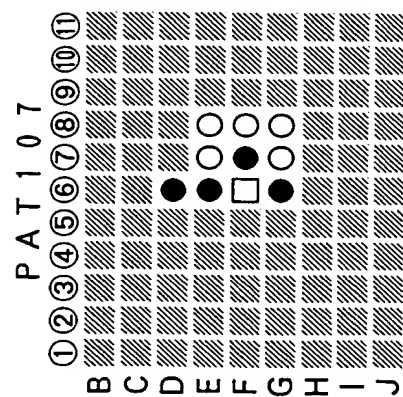
00 0000 00
00 0100 00
00 0110 00



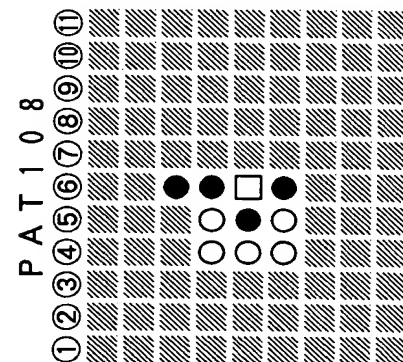
00 0000 00
00 0010 00
00 0110 00



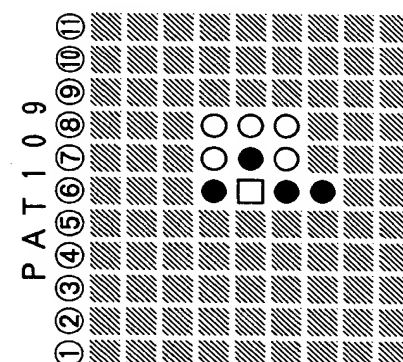
00 0000 00
00 0100 00
00 0110 00



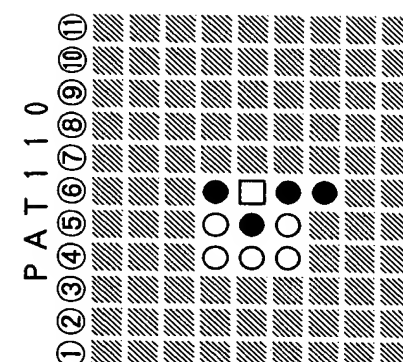
① 00 0000 00
② 00 0001 00
③ 00 0011 00



00 0000 00
00 1000 00
00 1100 00



00 0000 00
00 0001 00
00 0011 00



00 0000 00
00 1000 00
00 1100 00

FIG. 36

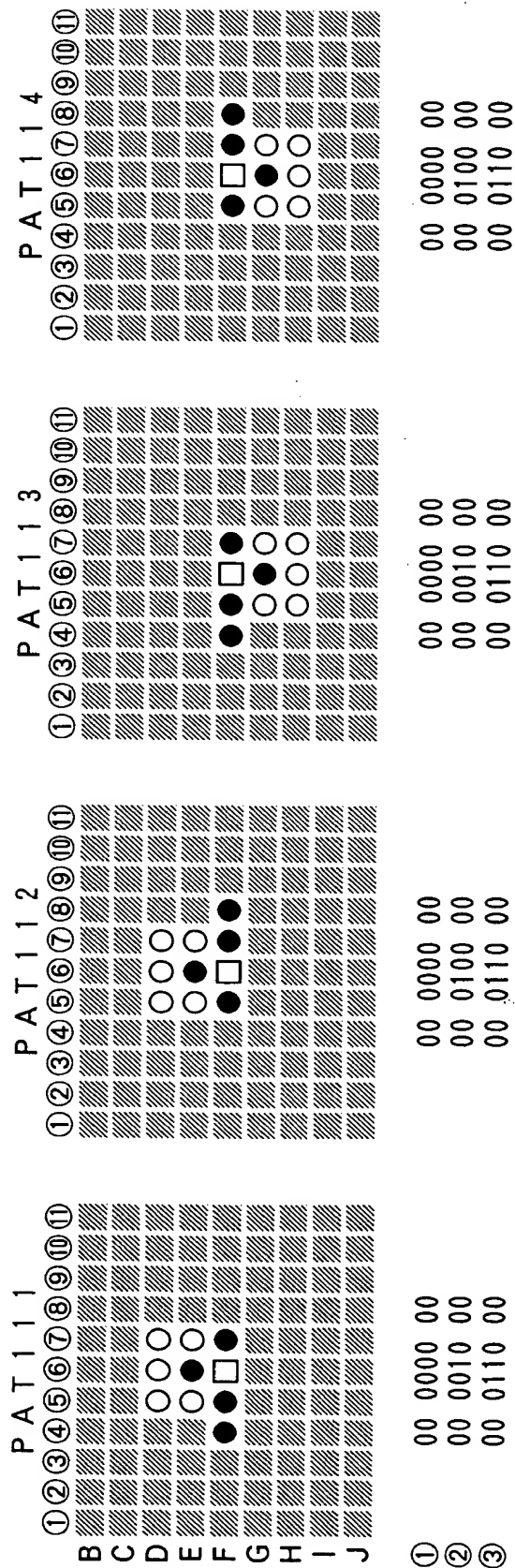
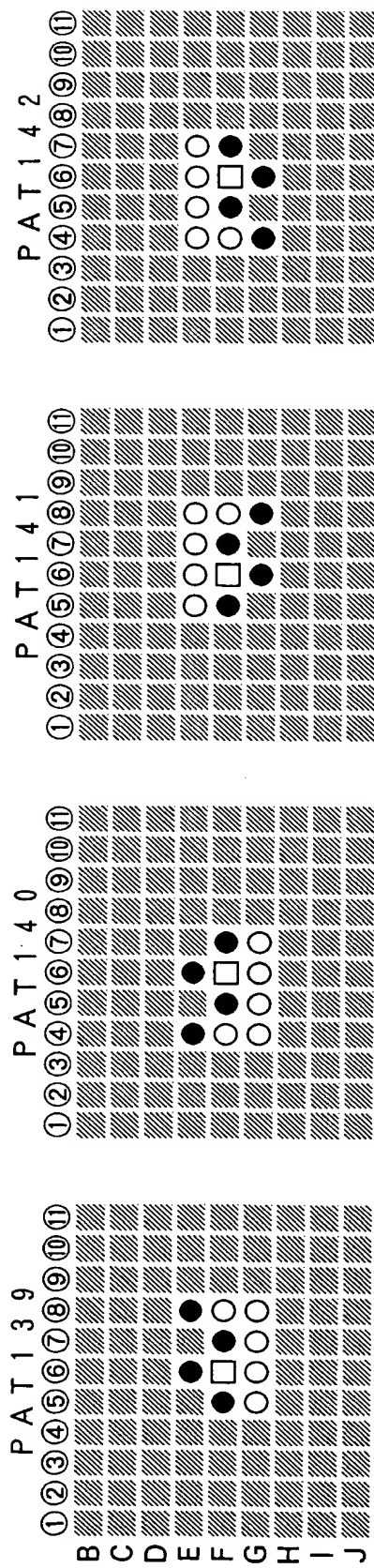


FIG. 37



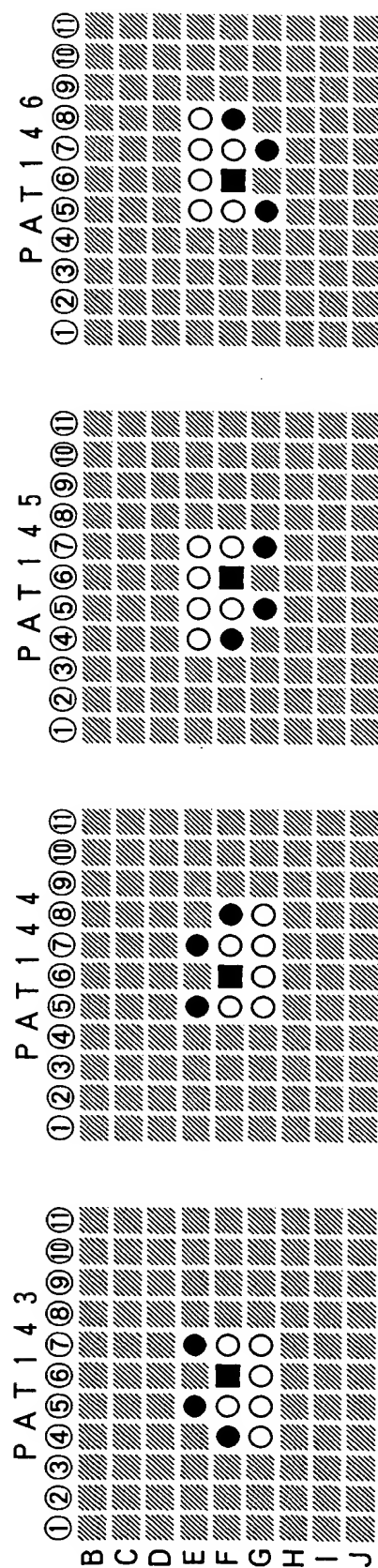
① 00 0000 00
 ② 00 0010 00
 ③ 00 0110 00

00 0000 00
 00 0100 00
 00 0110 00

00 0000 00
 00 0010 00
 00 0110 00

00 0000 00
 00 0100 00
 00 0110 00

40/72



① 00 0100 00
 ② 00 0110 00
 ③ 00 1110 00

00 0010 00
 00 0110 00
 00 0111 00

00 0100 00
 00 0110 00
 00 1110 00

00 0010 00
 00 0110 00
 00 0111 00

FIG. 38

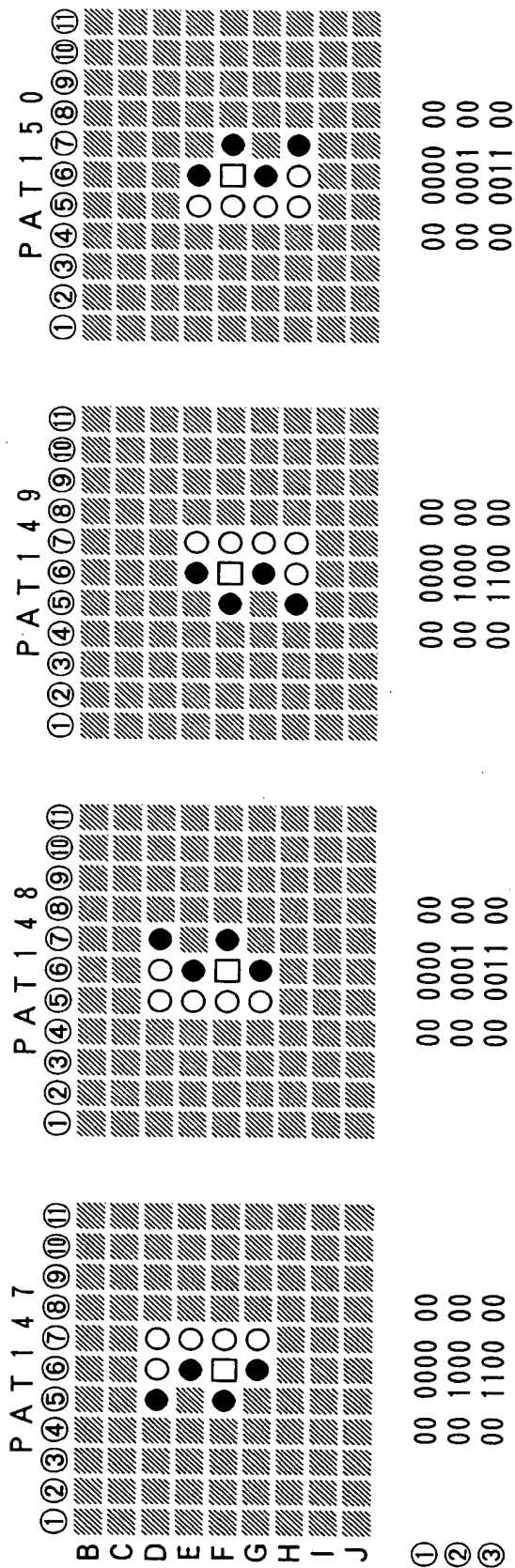


FIG. 39A

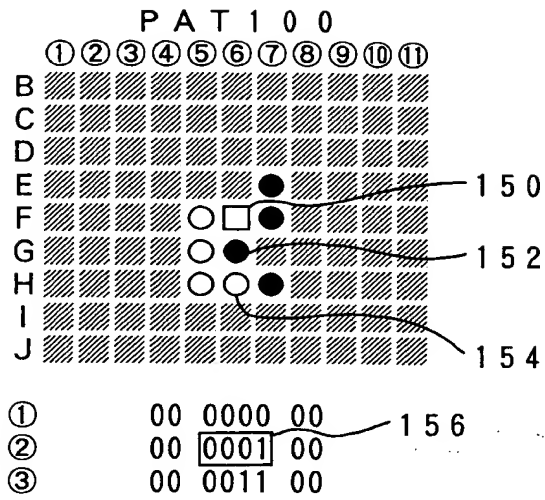


FIG. 39B

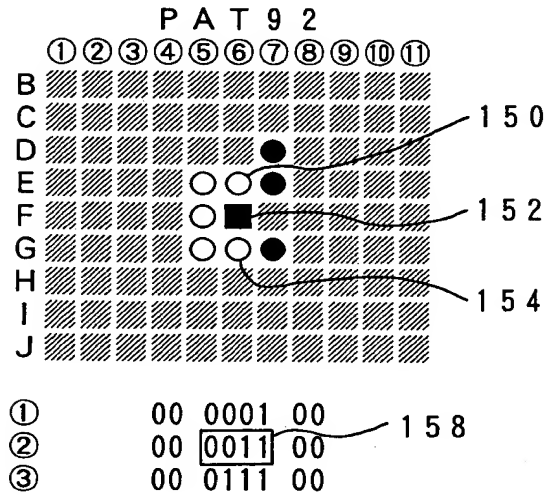


FIG. 39C

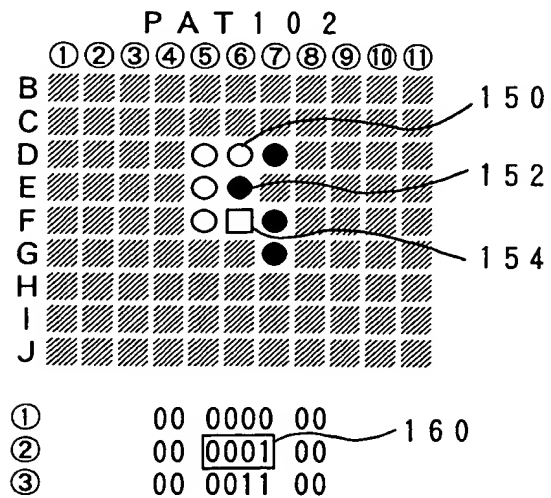


FIG. 40

DENSITY-PRESERVATION-PATTERN COMBINATIONS		
PAT91	PAT99	PAT101
PAT92	PAT100	PAT102
PAT93	PAT101	PAT99
PAT94	PAT102	PAT100

0935660 041701

FIG. 41A

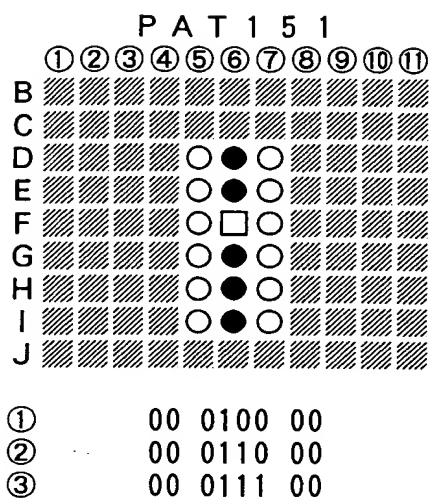


FIG. 41B

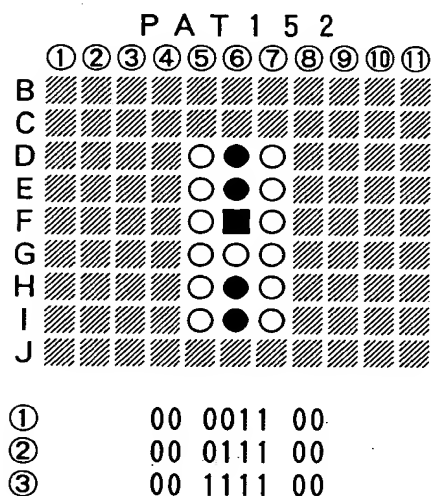


FIG. 41C

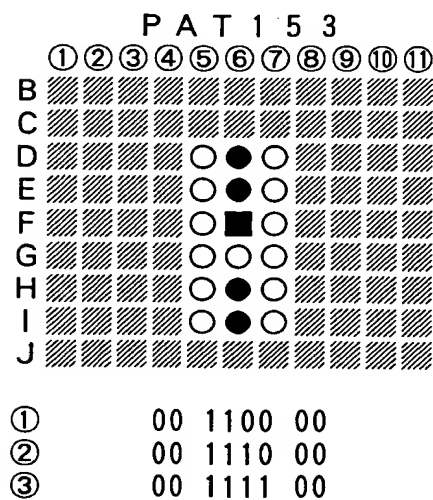


FIG. 42A

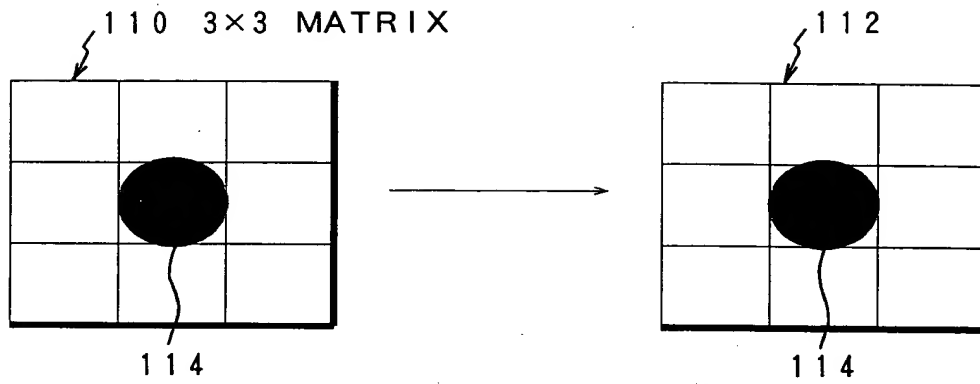


FIG. 42B

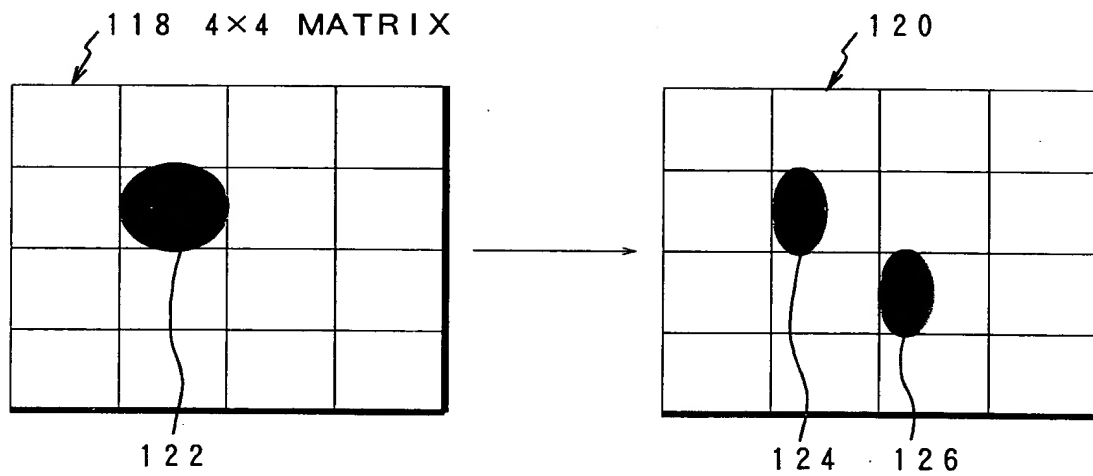
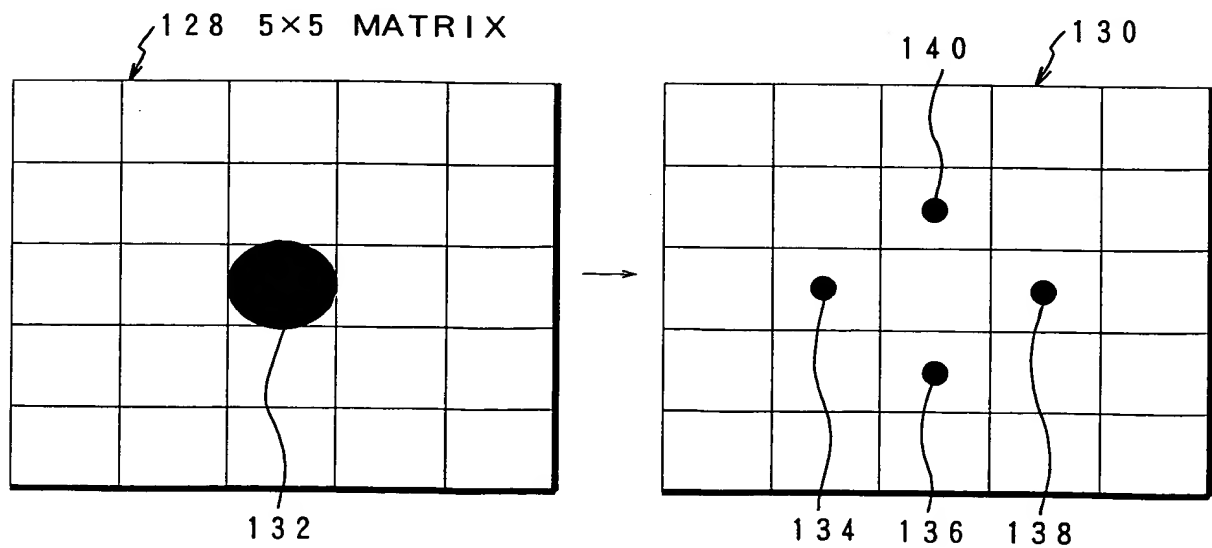
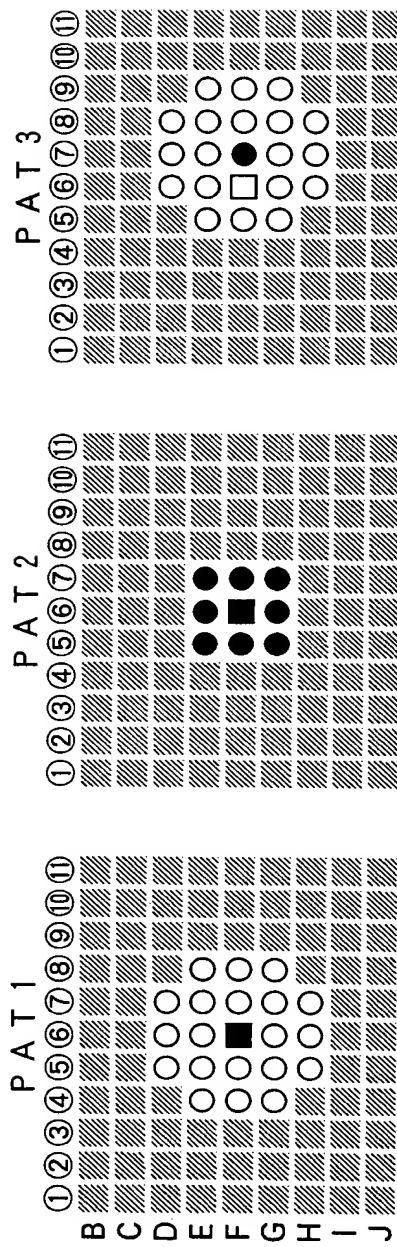


FIG. 42C



0035520 04170
T.O. 4740" 02955E860

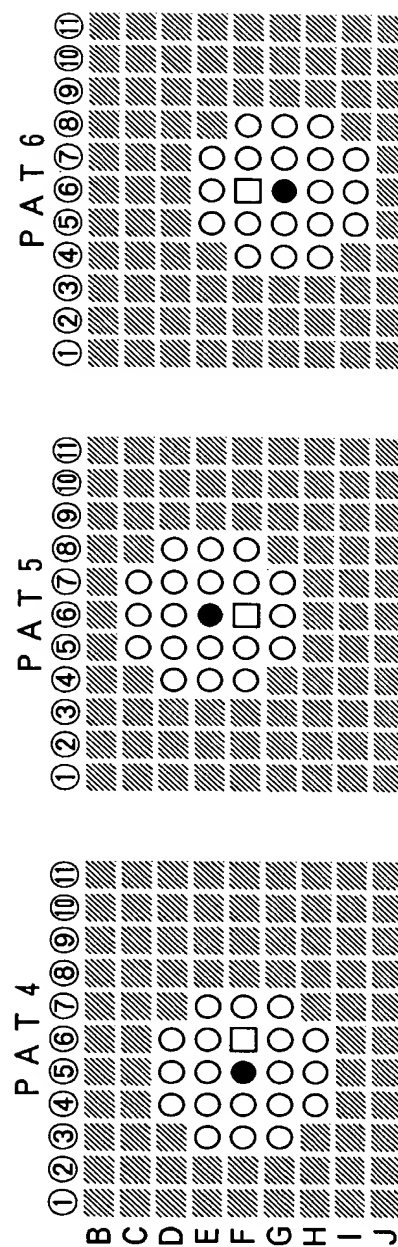
FIG. 43



① 00 0000 00
② 00 0010 00
③ 00 0110 00

00 1111 00
00 1110 00
00 0111 00

00 0100 00
00 0010 00
00 1110 00

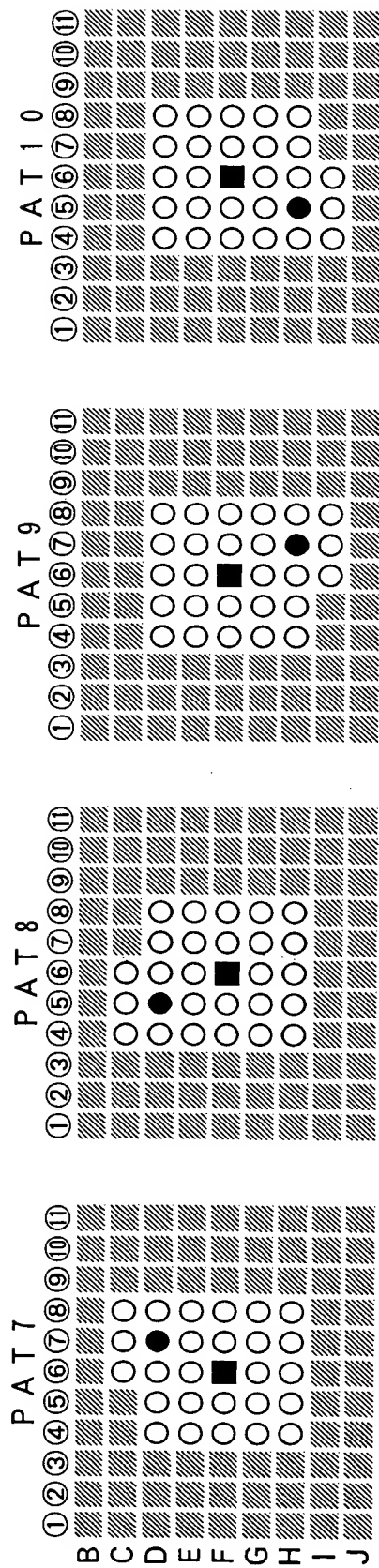


① 00 0100 00
② 00 0010 00
③ 00 0111 00

00 0010 00
00 0100 00
00 0110 00

00 0100 00
00 0010 00
00 0110 00

FIG. 44

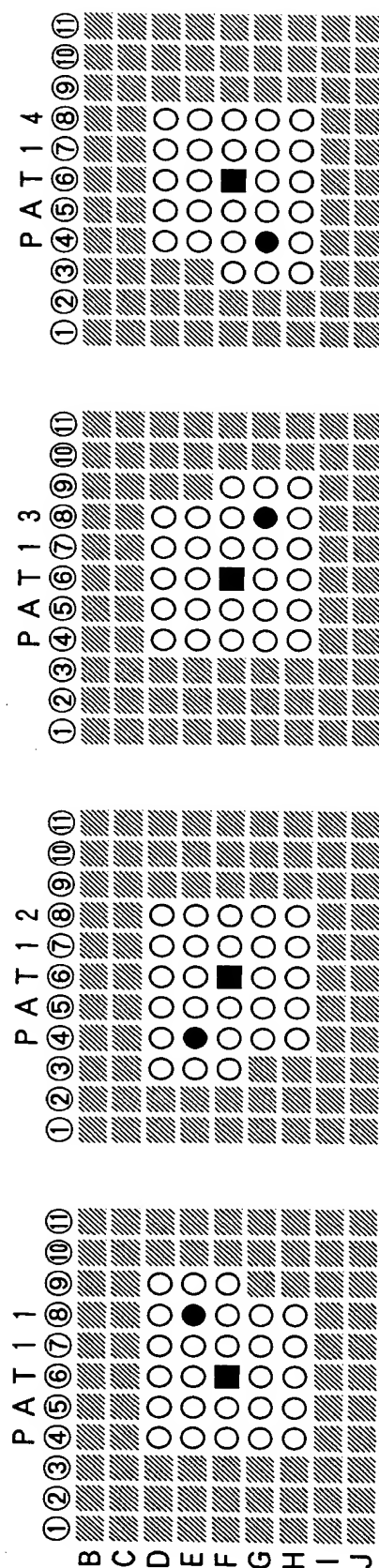


① 00 0000 00
② 00 0010 00
③ 00 0110 00

00 0000 00
00 0100 00
00 0110 00

00 0000 00
00 0010 00
00 0110 00

00 0000 00
00 0100 00
00 0110 00



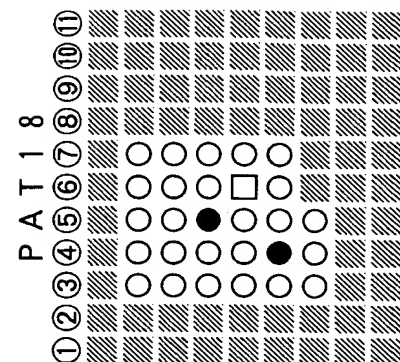
① 00 0000 00
② 00 0100 00
③ 00 0110 00

00 0000 00
00 0010 00
00 0110 00

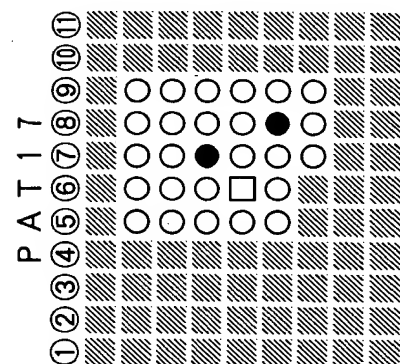
00 0000 00
00 0100 00
00 0110 00

00 0000 00
00 0010 00
00 0110 00

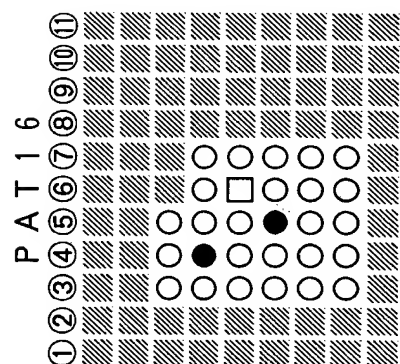
FIG. 45



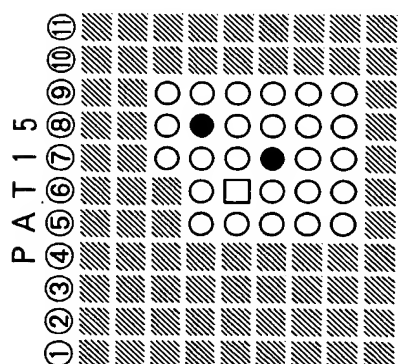
00	0000	00
00	0010	00
00	0110	00



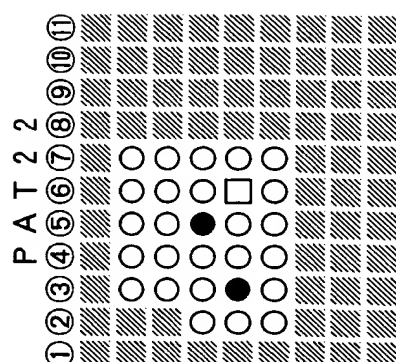
00	0000	00
00	0100	00
00	0110	00



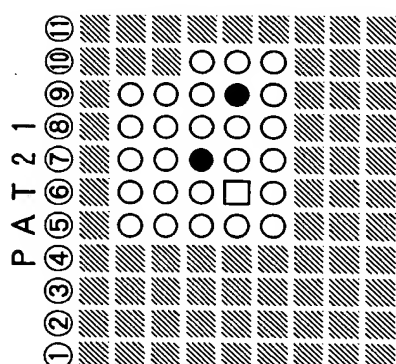
00	0000	00
00	0010	00
00	0110	00



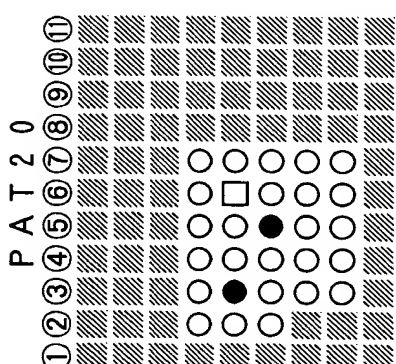
```
00 0000 00
00 0100 00
00 0110 00
```



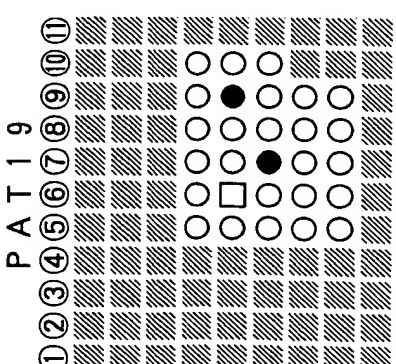
00	0000	00
00	0010	00
00	0110	00



00	0000	00
00	0100	00
00	0110	00

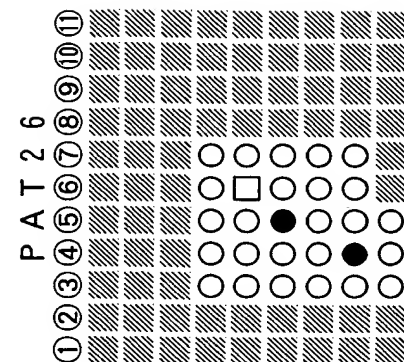


00	0000	00
00	0010	00
00	0110	00

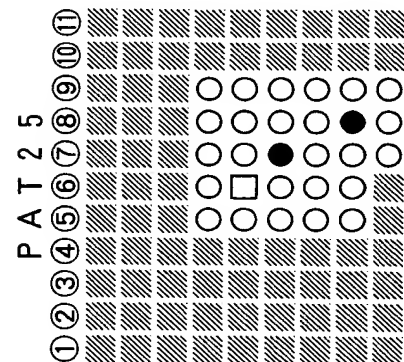


00	0000	00
00	0100	00
00	0110	00

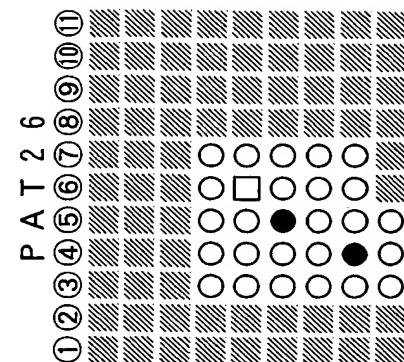
FIG. 46



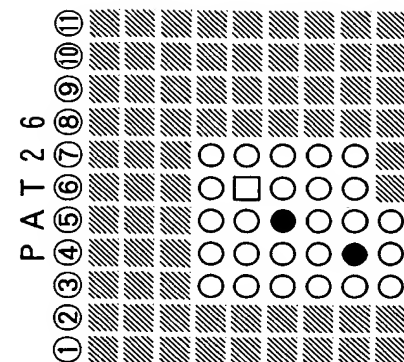
① 00 0000 00
② 00 0100 00
③ 00 0010 00



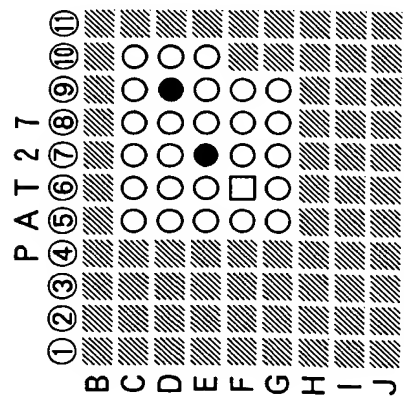
00 0000 00
00 0010 00
00 0110 00



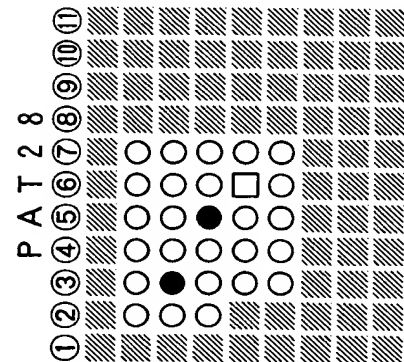
00 0000 00
00 0100 00
00 0110 00



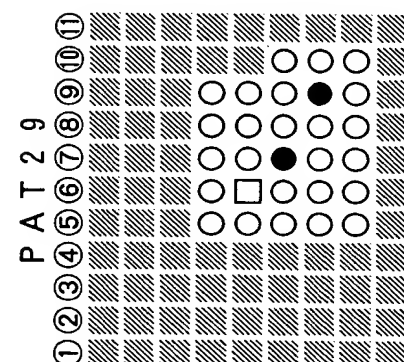
00 0000 00
00 0010 00
00 0110 00



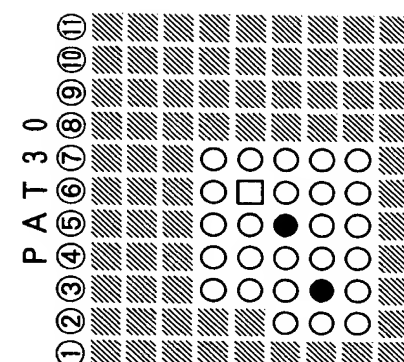
① 00 0000 00
② 00 0100 00
③ 00 0110 00



00 0000 00
00 0010 00
00 0110 00

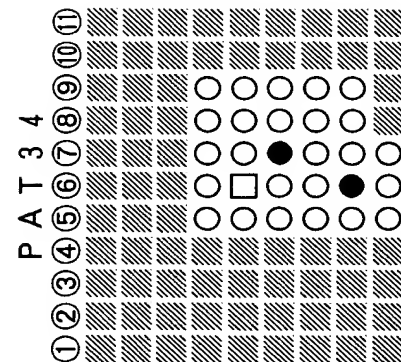


00 0000 00
00 0100 00
00 0110 00

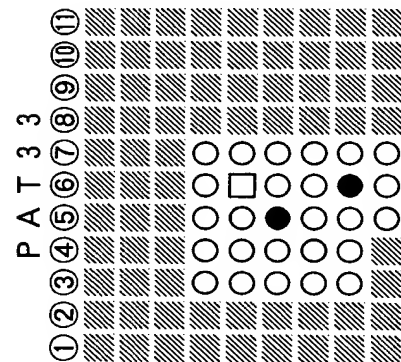


00 0000 00
00 0010 00
00 0110 00

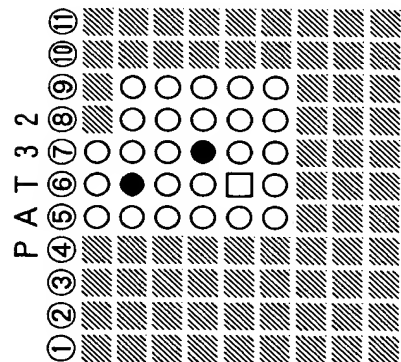
FIG. 47



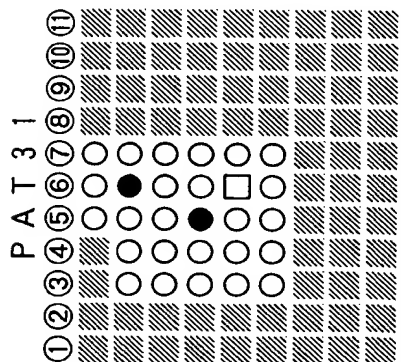
00 0000 00
00 0100 00
00 0010 00



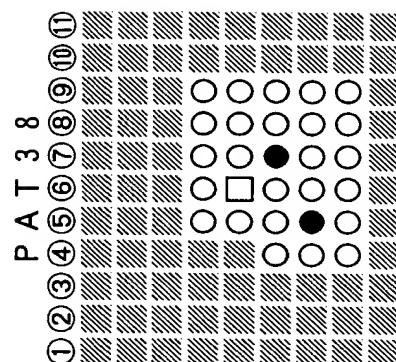
00 0000 00
00 0010 00
00 0110 00



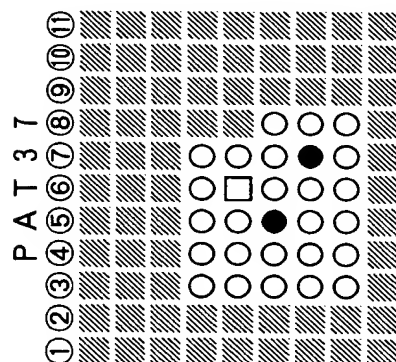
00 0000 00
00 0100 00
00 0110 00



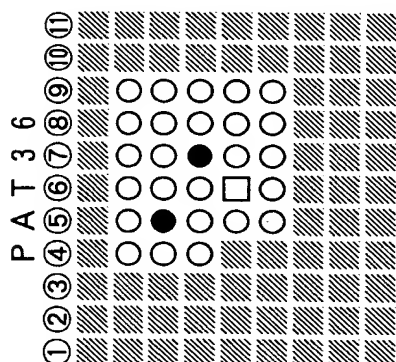
00 0000 00
00 0010 00
00 0110 00



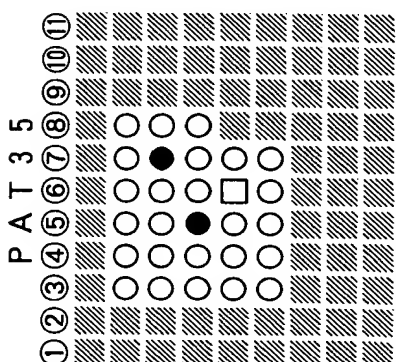
00 0000 00
00 0100 00
00 0110 00



00 0000 00
00 0010 00
00 0110 00

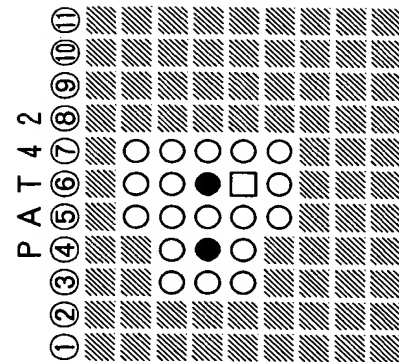


00 0000 00
00 0100 00
00 0110 00

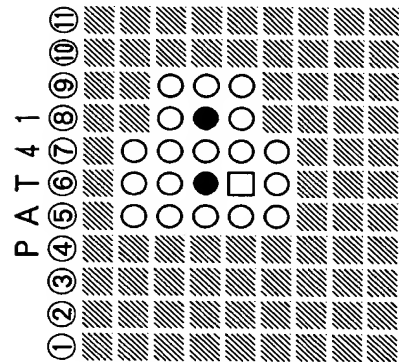


00 0000 00
00 0010 00
00 0110 00

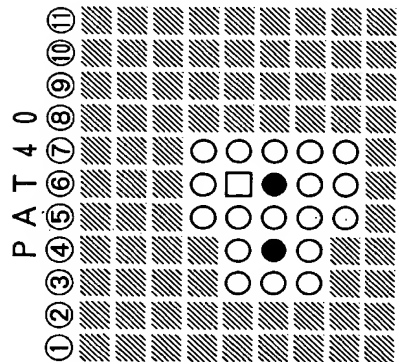
FIG. 48



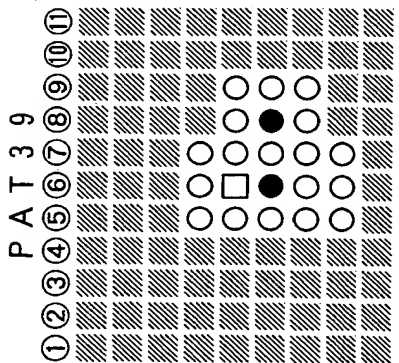
00 0010 00
00 0110 00
00 0111 00



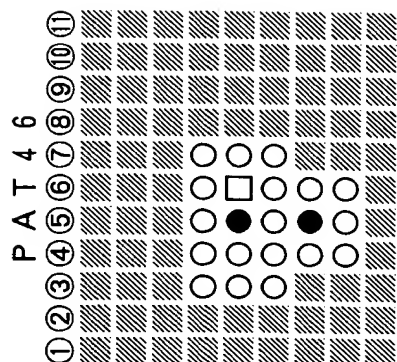
00 0100 00
00 0110 00
00 1110 00



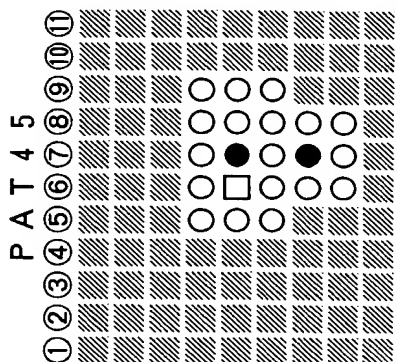
00 0010 00
00 0110 00
00 0111 00



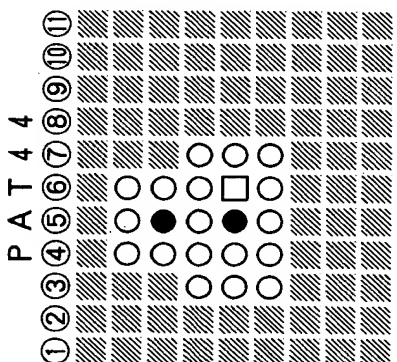
00 0100 00
00 0110 00
00 1110 00



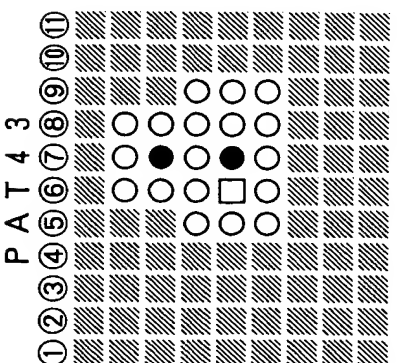
00 0010 00
00 0110 00
00 0111 00



00 0100 00
00 0110 00
00 1110 00



00 0010 00
00 0110 00
00 0111 00



00 0100 00
00 0110 00
00 1110 00

FIG. 50

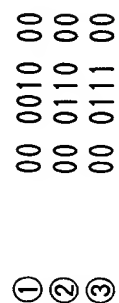
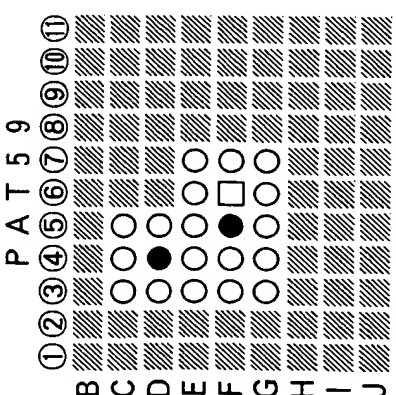
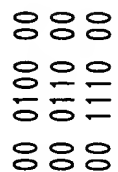
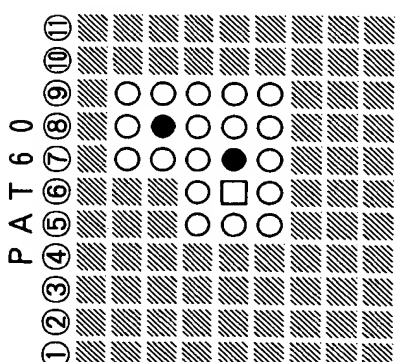
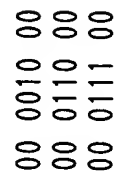
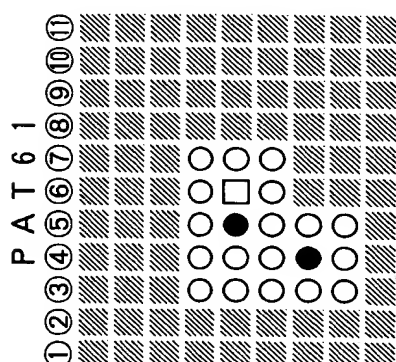
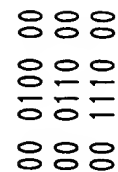
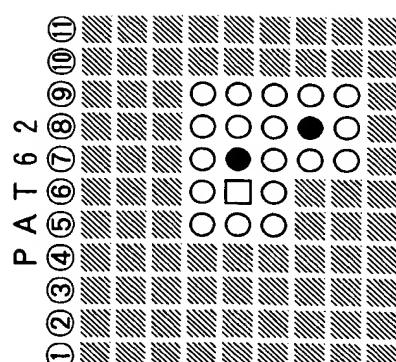
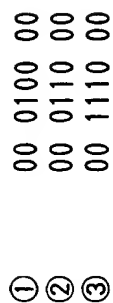
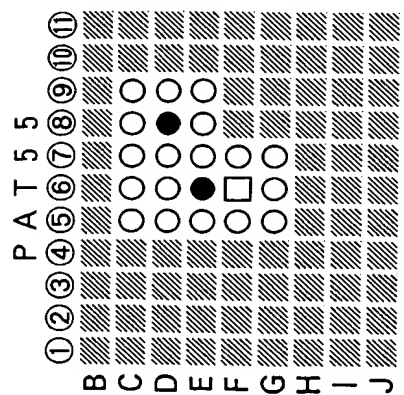
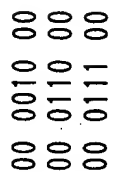
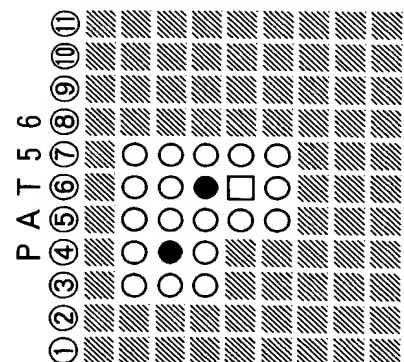
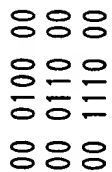
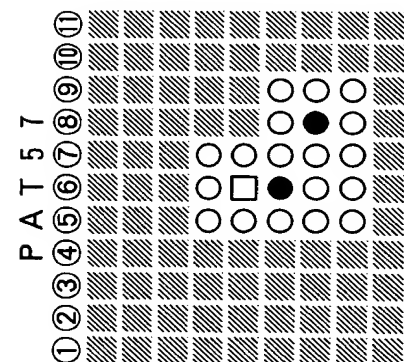
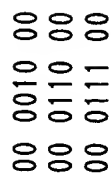
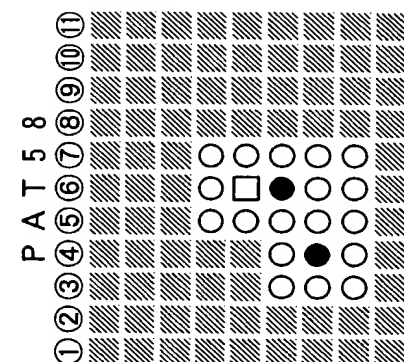
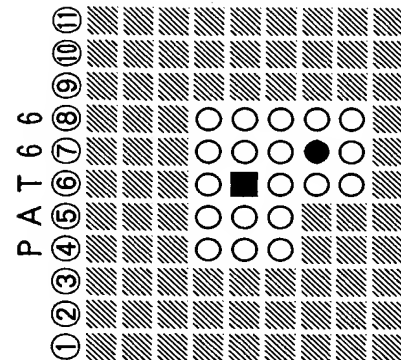
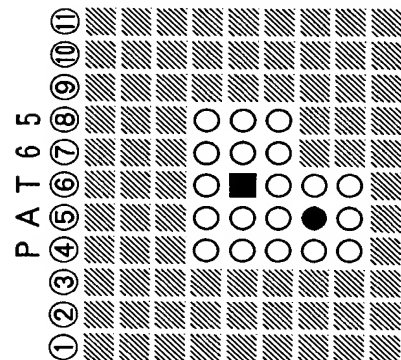


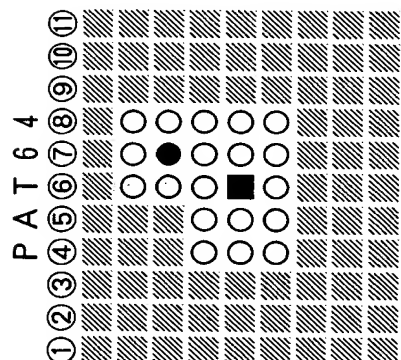
FIG. 51



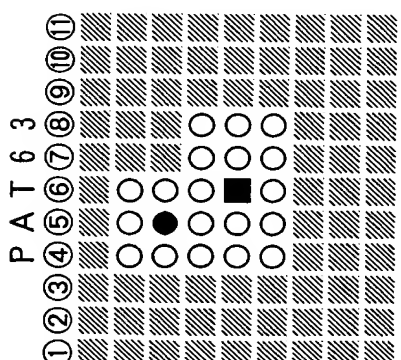
00 0000 00
00 0010 00
00 0110 00



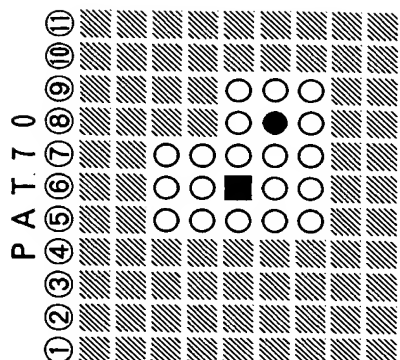
00 0000 00
00 0100 00
00 0110 00



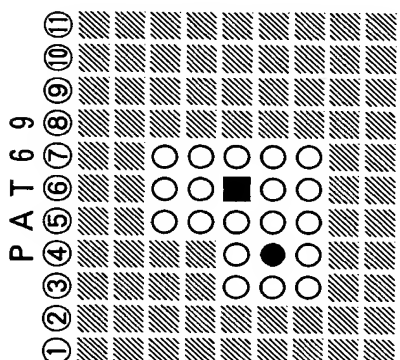
00 0000 00
00 0010 00
00 0110 00



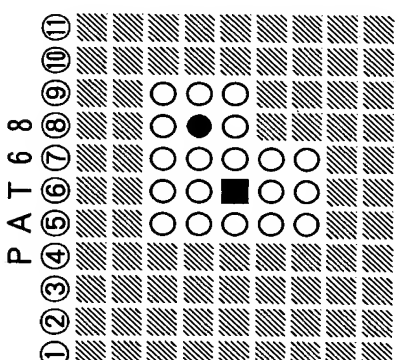
00 0000 00
00 0100 00
00 0110 00



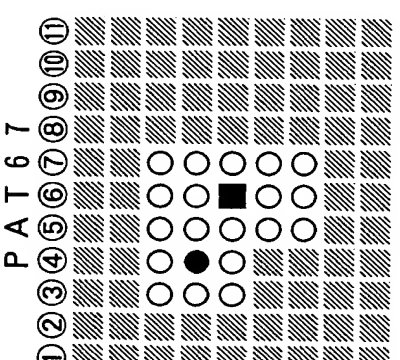
00 0000 00
00 0010 00
00 0110 00



00 0000 00
00 0100 00
00 0110 00



00 0000 00
00 0010 00
00 0110 00



00 0000 00
00 0100 00
00 0110 00

FIG. 52

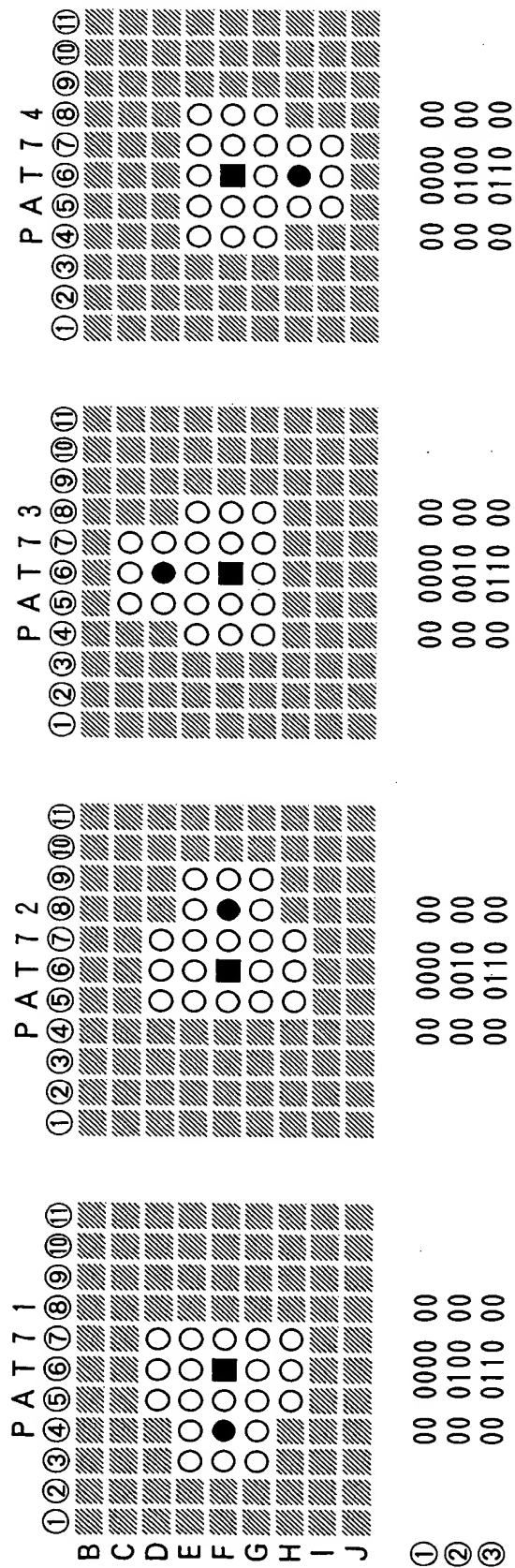


FIG. 54

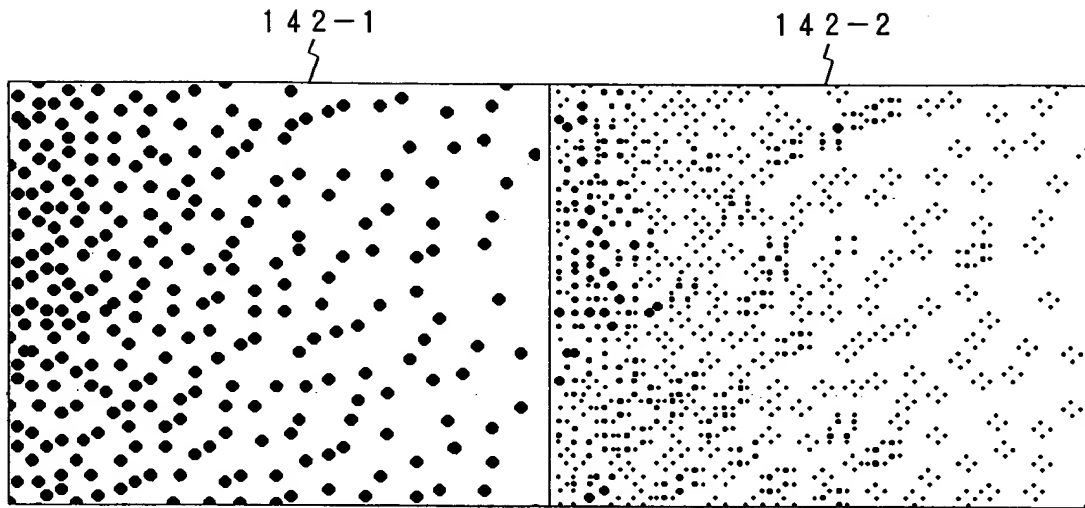
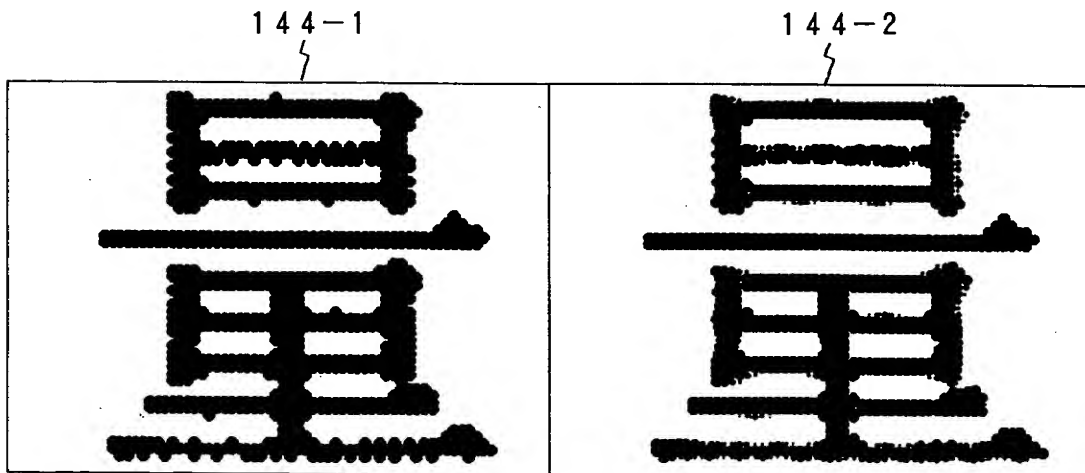
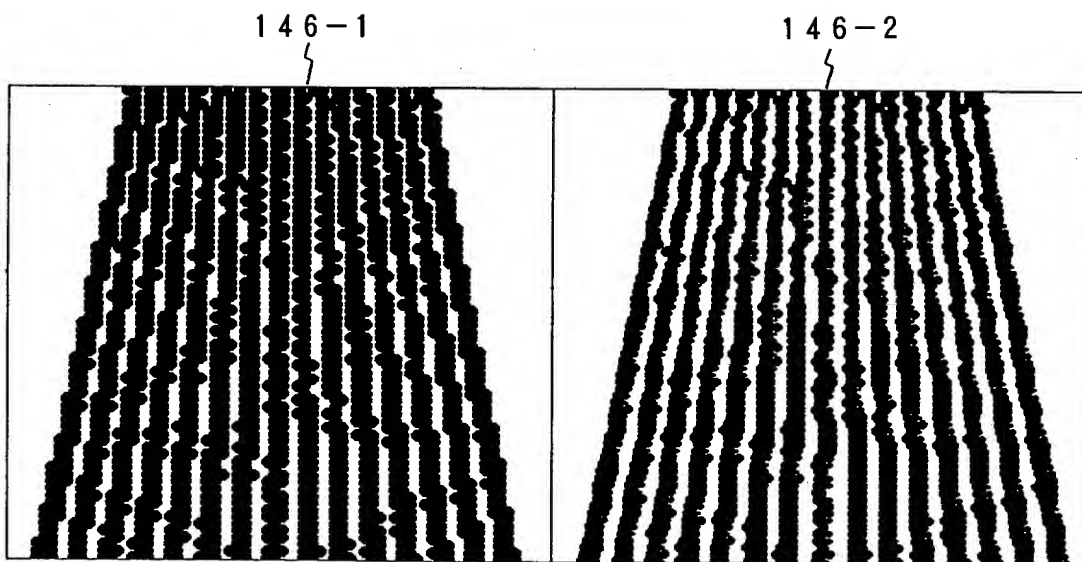


FIG. 55



09835620-041701

FIG. 56



09835500 041701

FIG. 57

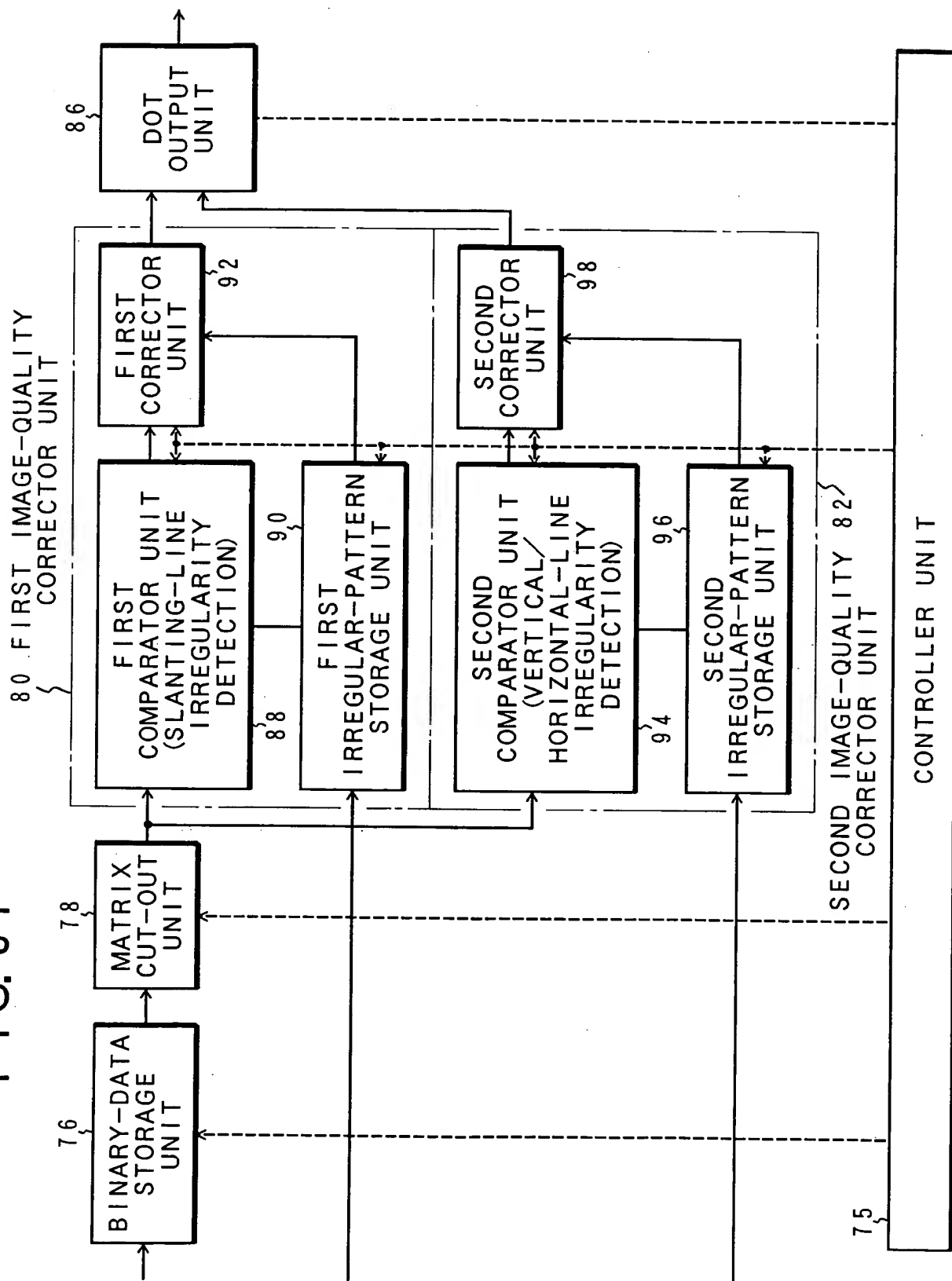




FIG. 58A

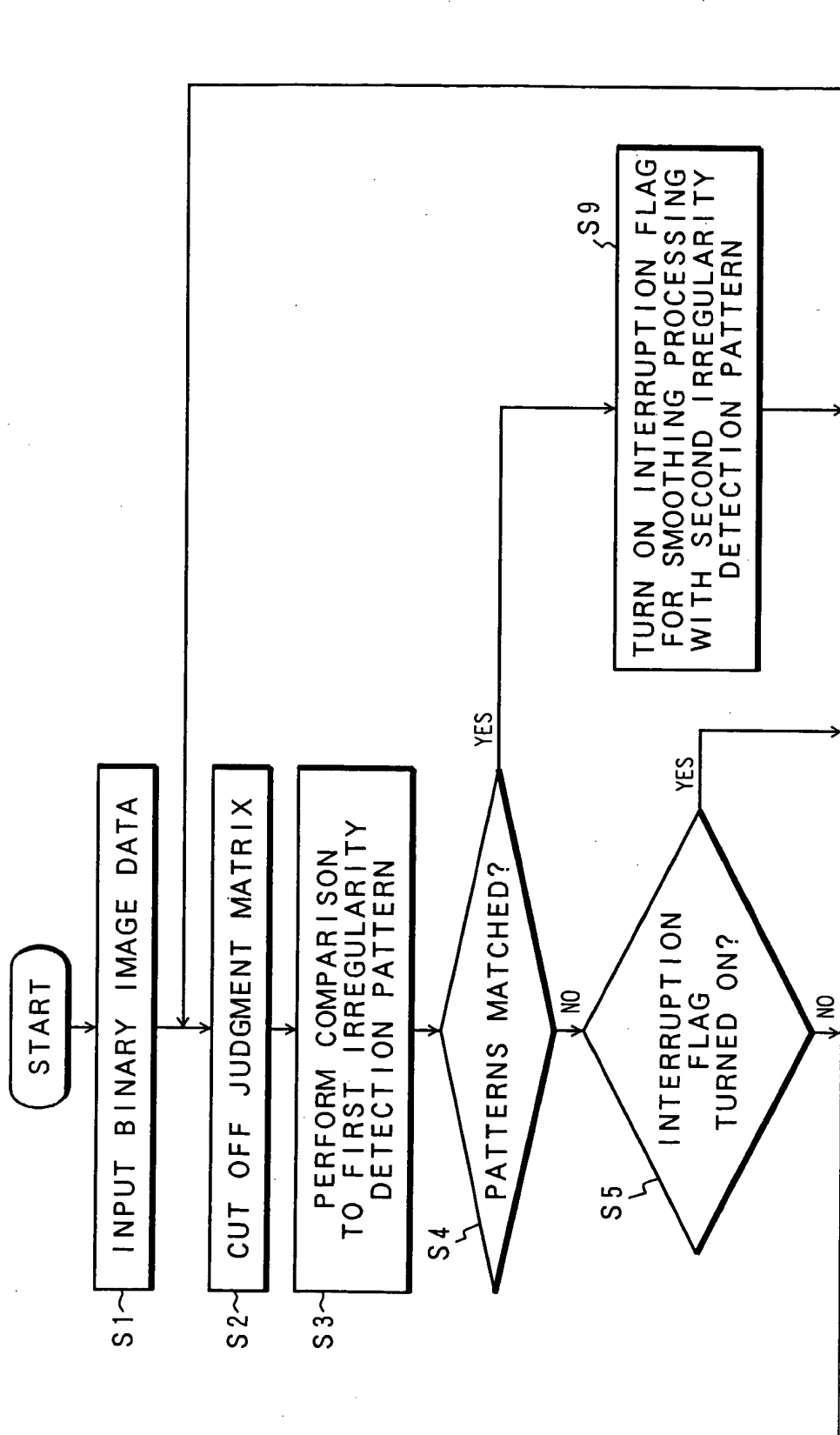


FIG. 58B

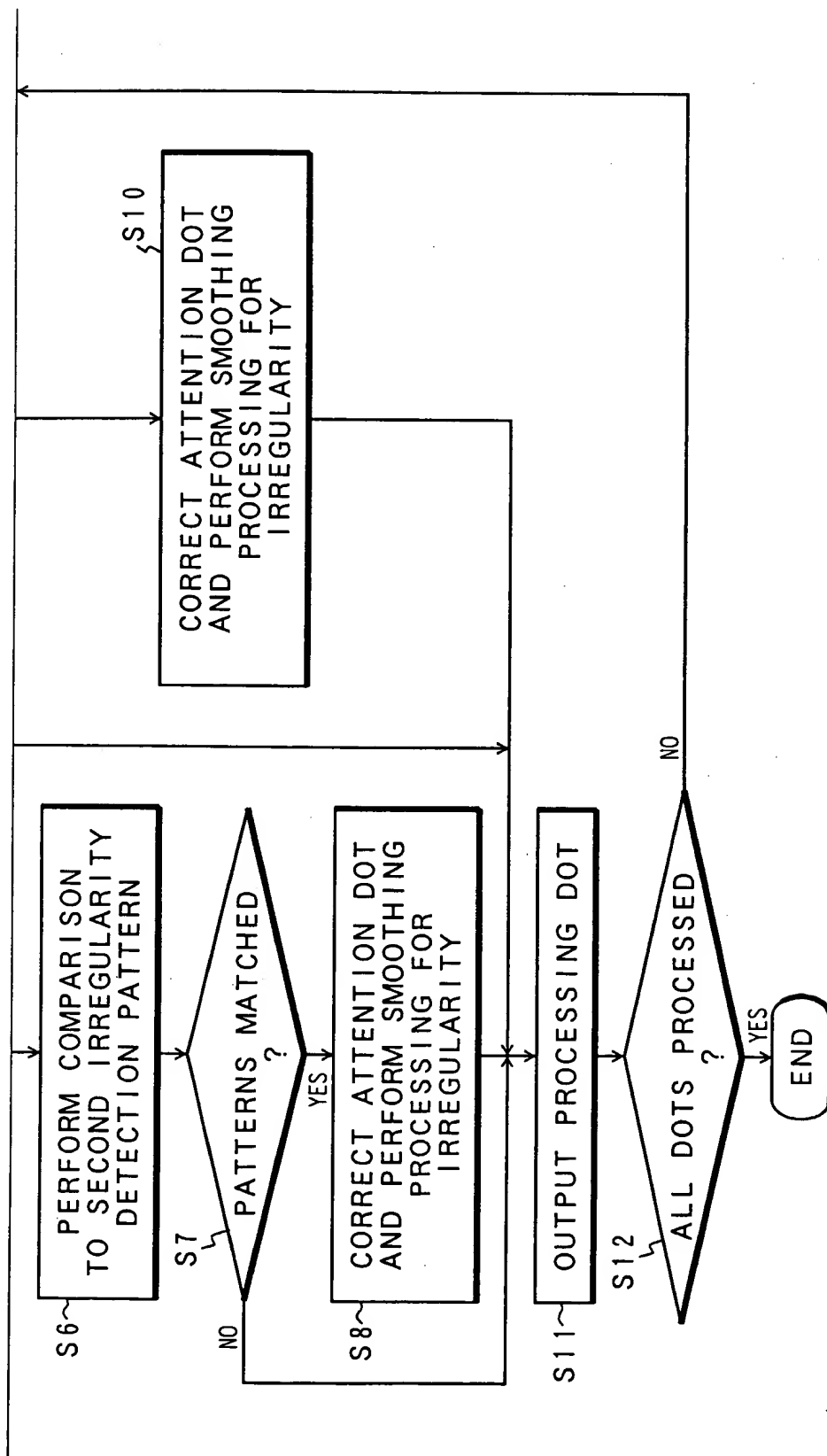


FIG. 59

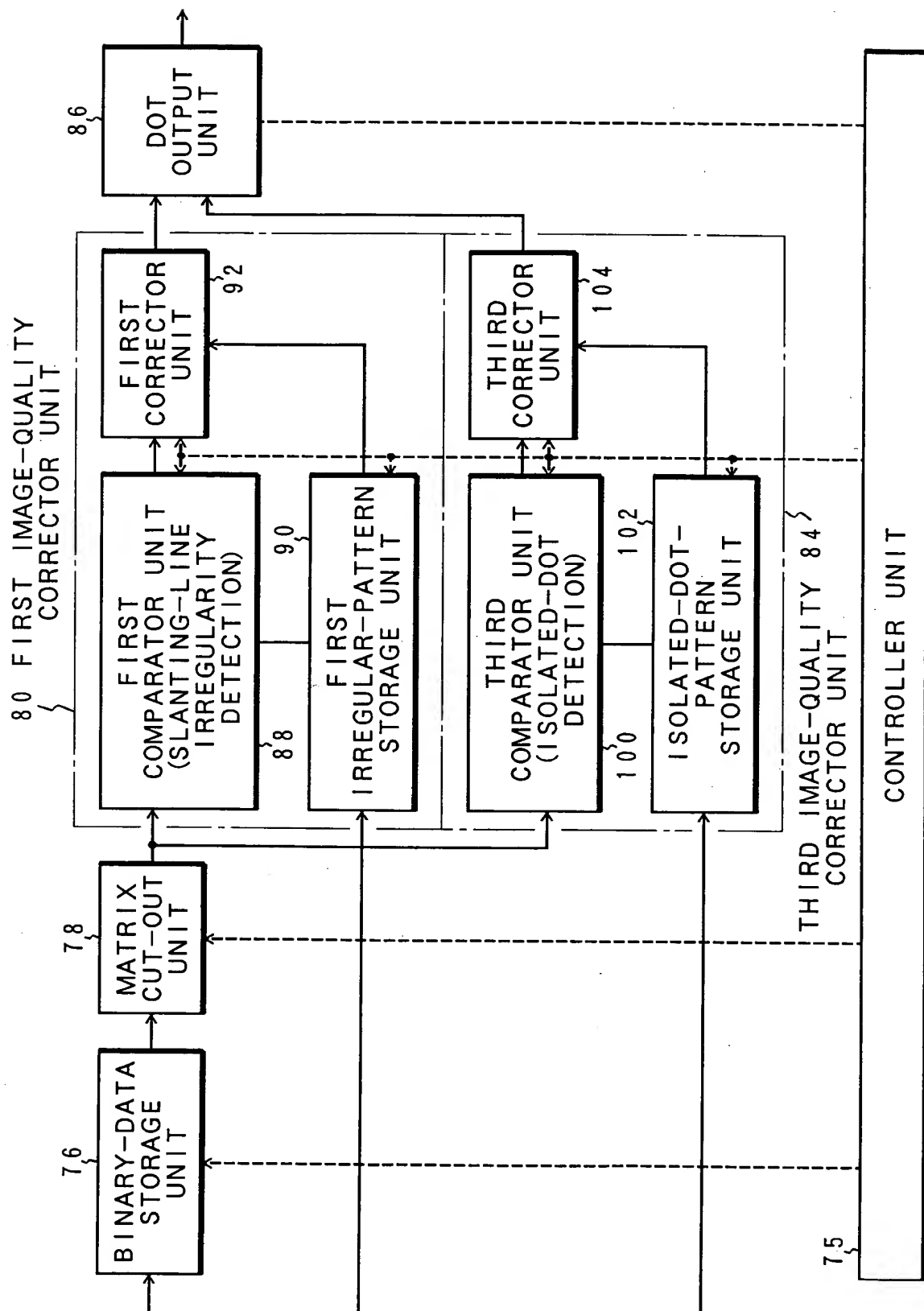




FIG. 60A

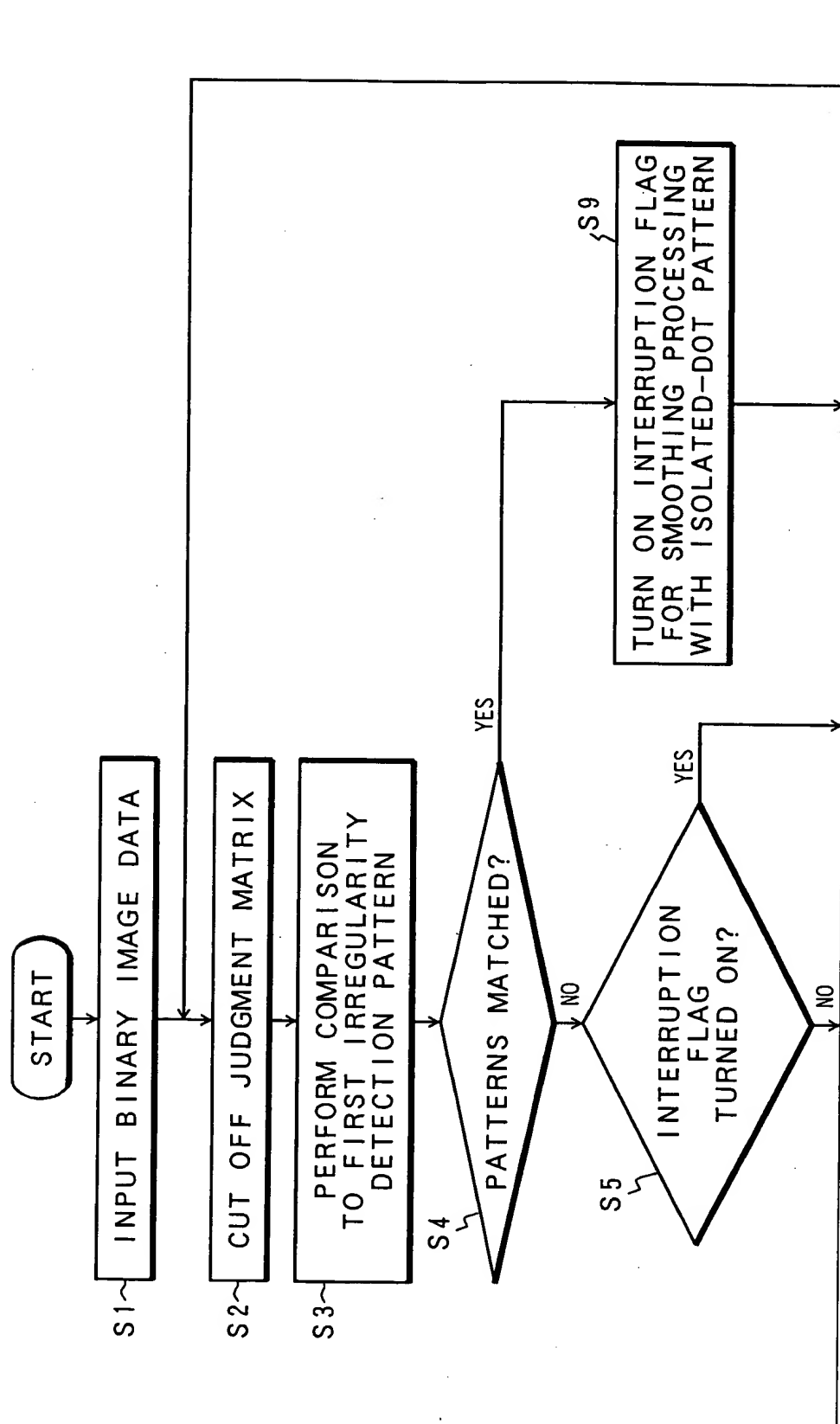


FIG. 60B

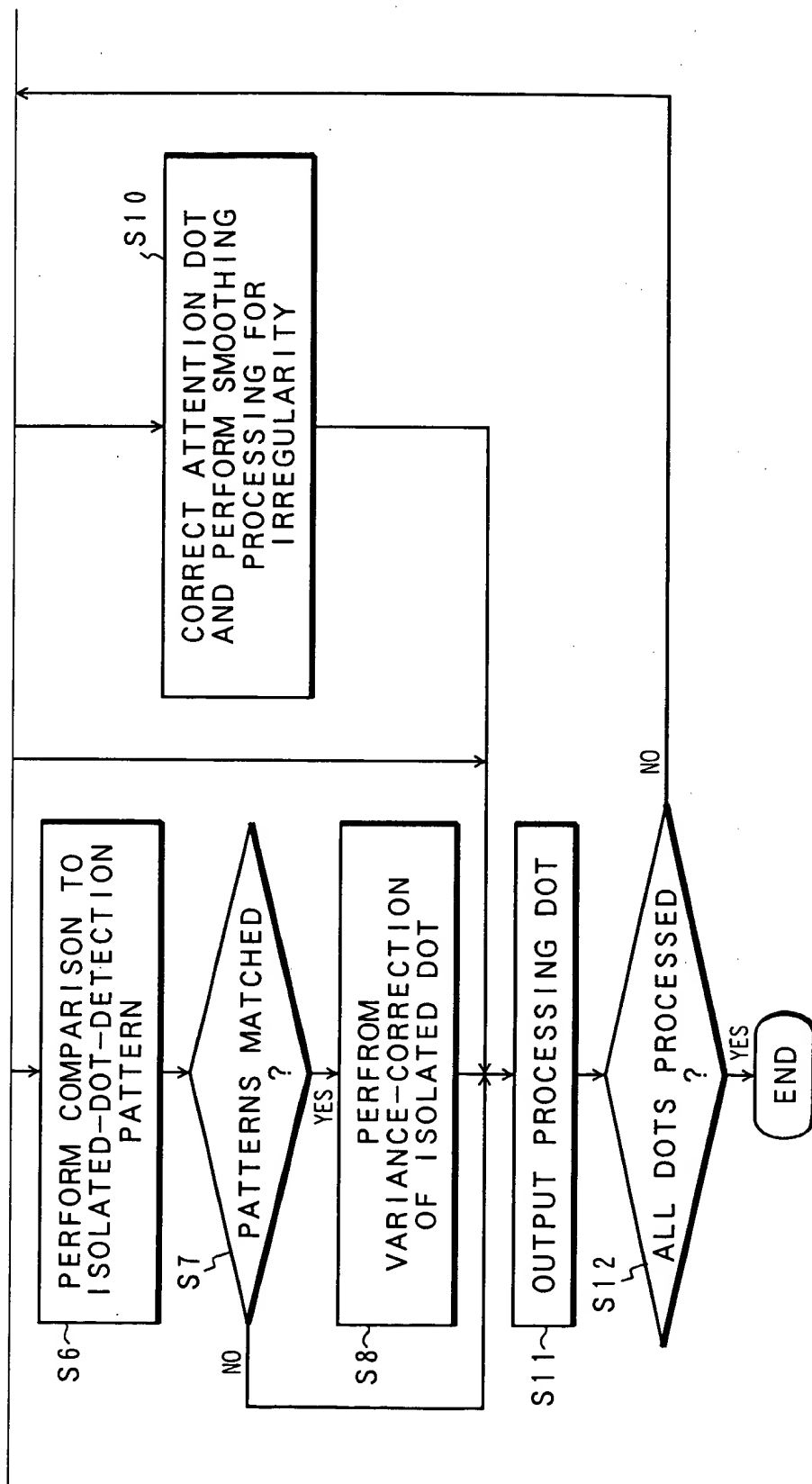


FIG. 61

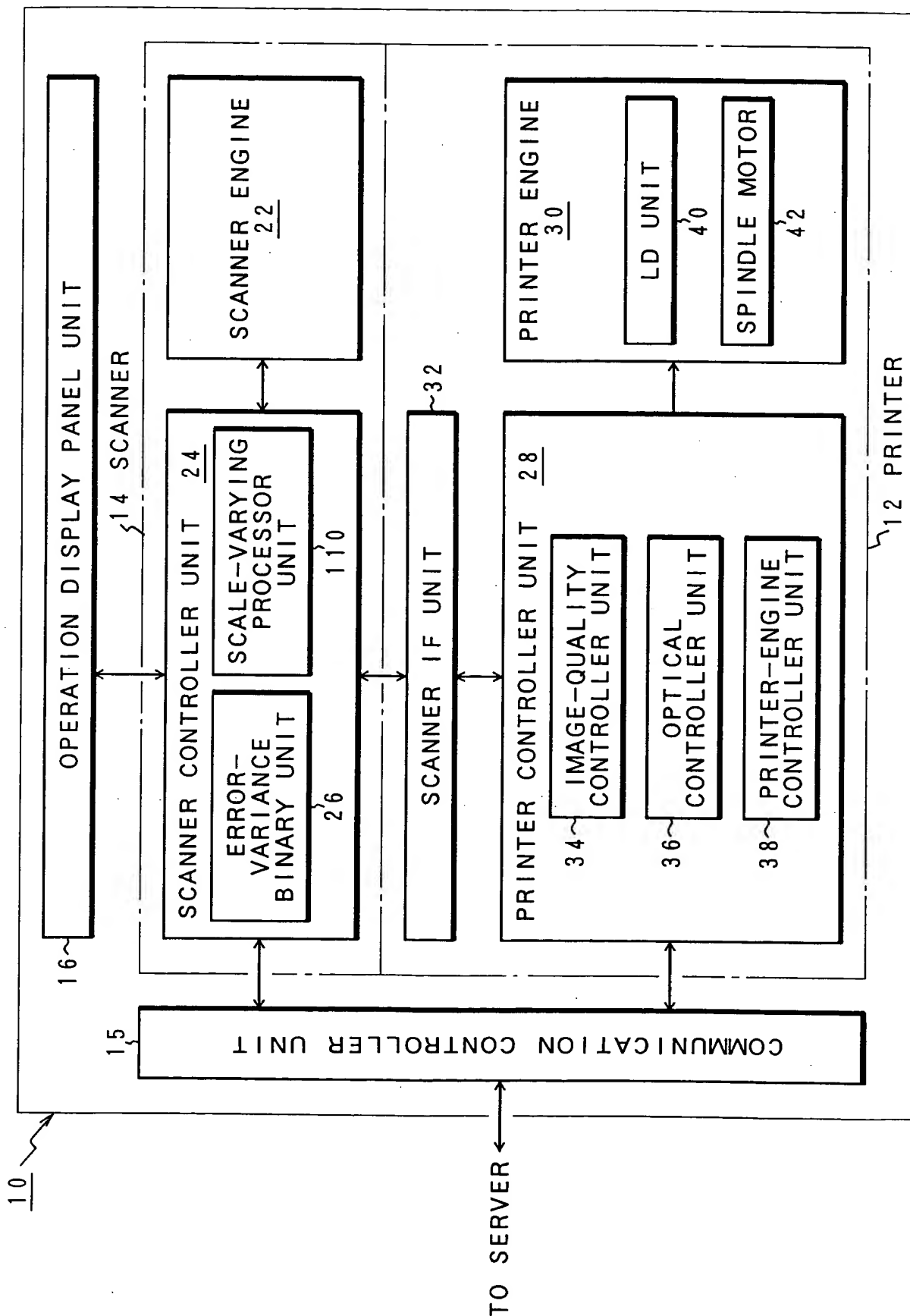
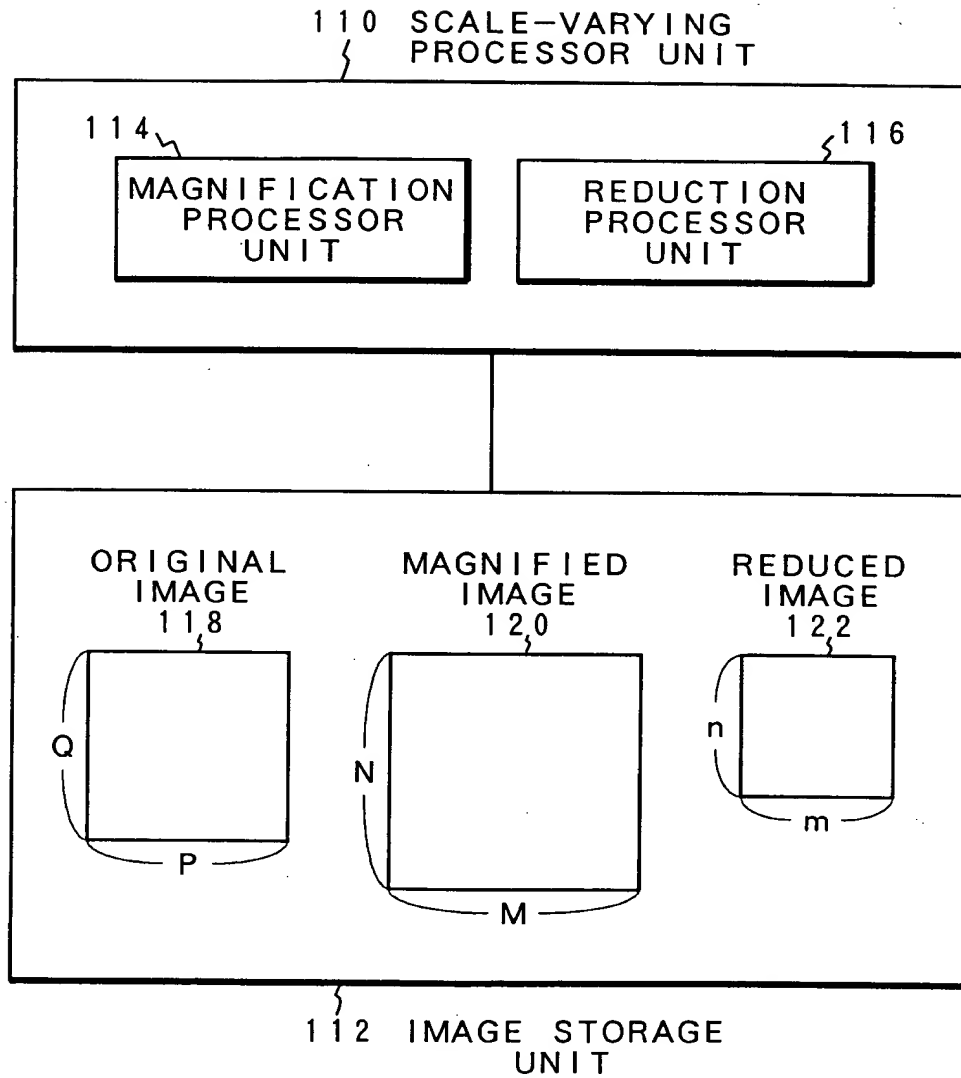
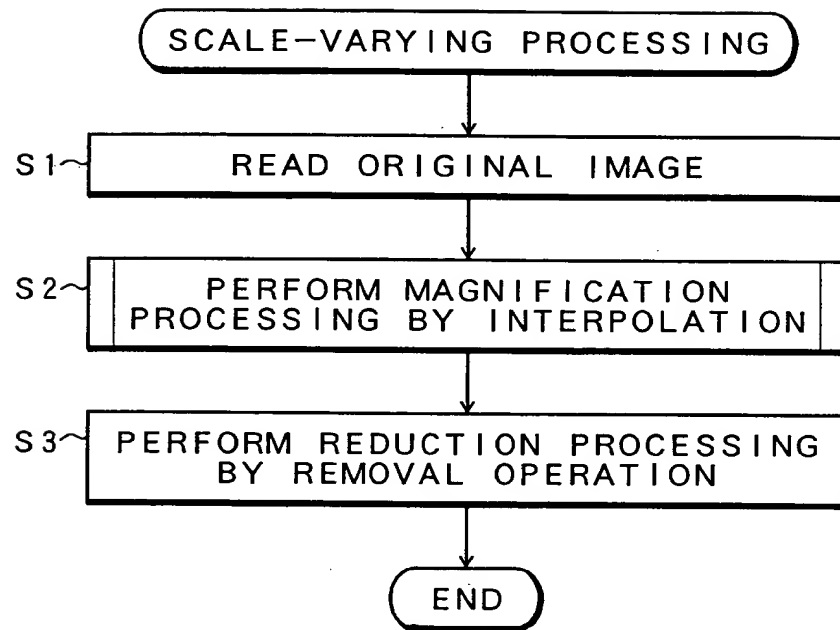


FIG. 62



0983560-041701

FIG. 63



09835620-041701

FIG. 64A

118

A	B	C
D	E	F
G	H	I

FIG. 64B

120

A	$(A+B) / 2$	B	$(B+C) / 2$	C	C
$(A+B) / 2$	$(A+B+C+D) / 4$	$(B+C) / 2$	$(C+D+E+F) / 4$	$(C+F) / 2$	$(C+F) / 2$
D	$(D+E) / 2$	E	$(E+F) / 2$	F	F
$(D+G) / 2$	$(D+E+G+H) / 4$	$(E+H) / 2$	$(E+F+H+I) / 4$	$(F+I) / 2$	$(F+I) / 2$
G	$(G+H) / 2$	H	$(H+I) / 2$	I	I

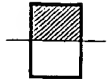
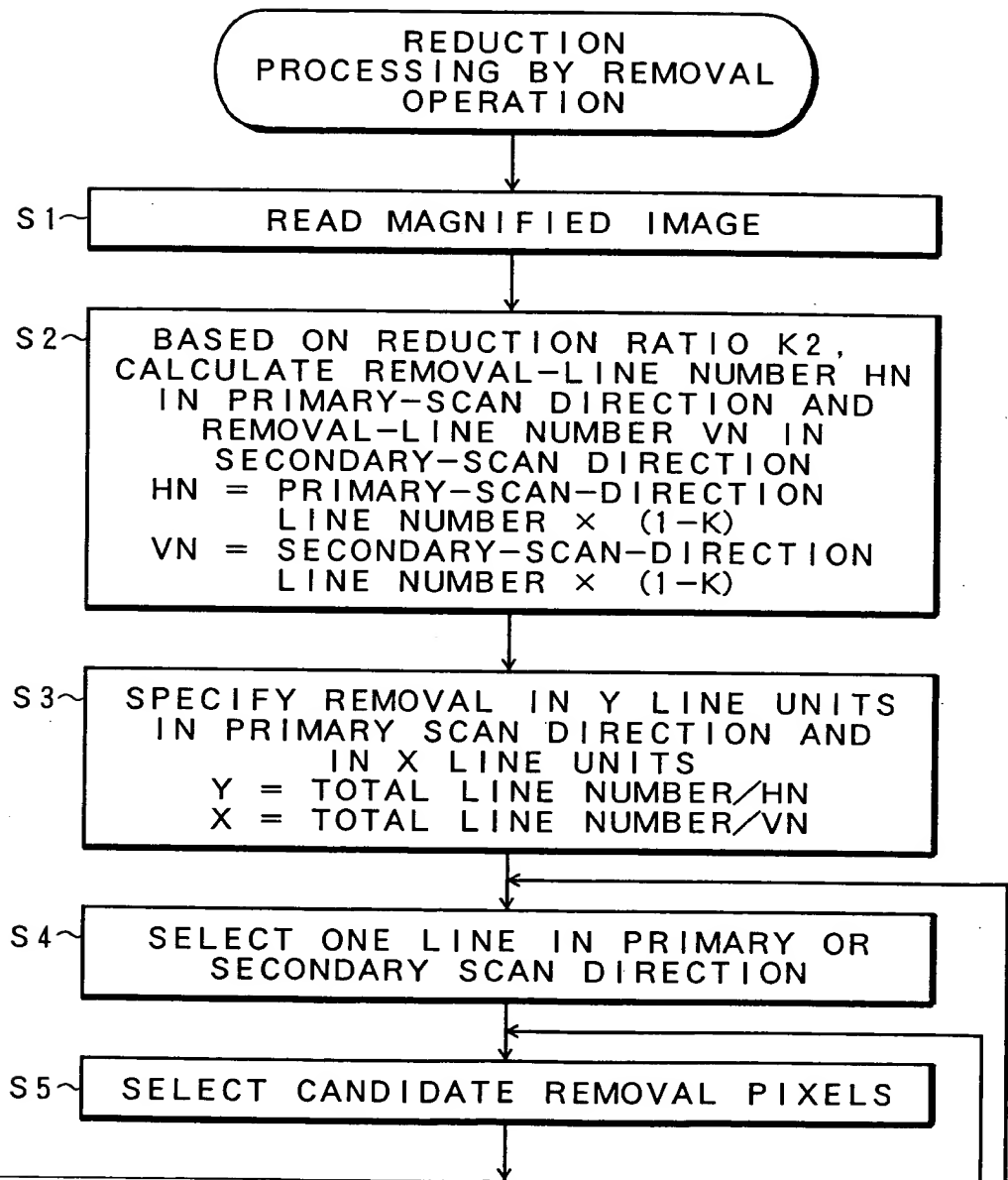


FIG. 65A



09835620-041701

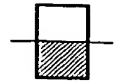
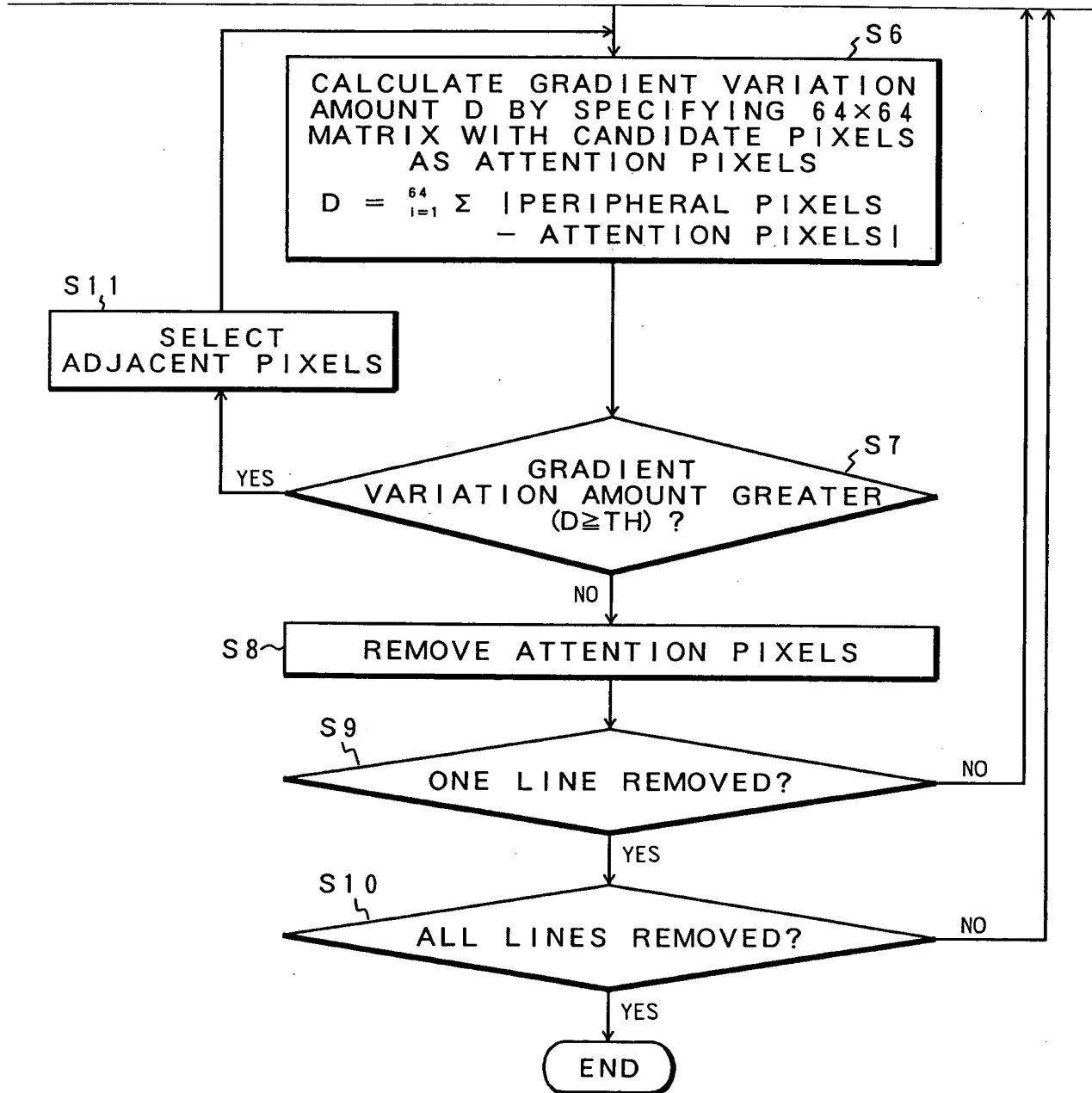
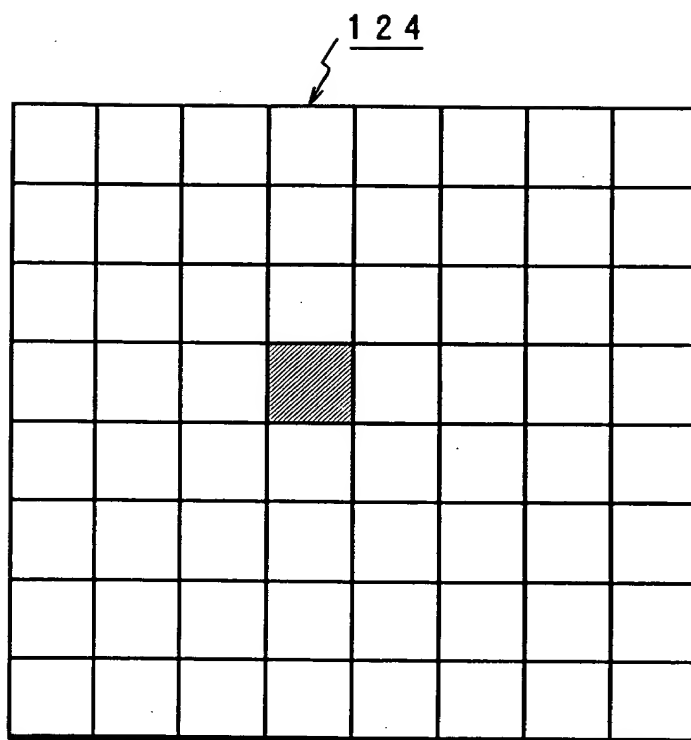


FIG. 65B



FD/T40" 0295E860

FIG. 66



09835620 041701

FIG. 67A

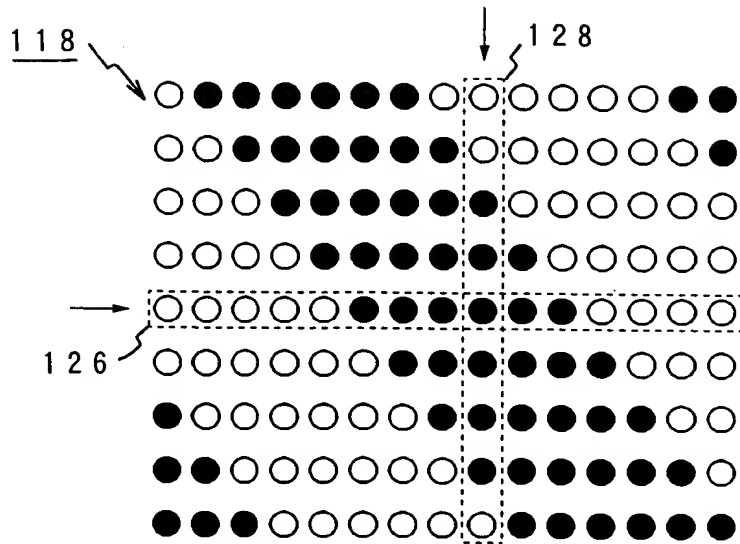


FIG. 67B

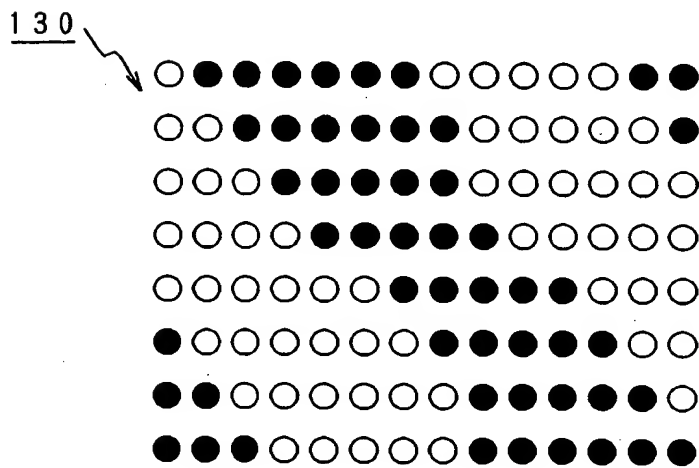


FIG. 67C

